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## ORIGINAL ARTICLES.

### THE CAUSATION OF MULTIPLE NEURITIS.

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THE diagnosis of multiple neuritis no longer presents any difficulty, as the symptoms of the disease are now well known, and their various combinations, presenting paralytic, ataxic, neuralgic, and vasomotor types of the affection, according to the predominance of one set of symptoms over others, are everywhere recognized.

But as the clinical study of the disease has become more exact and complete it has become evident that a very large number of different causes may act to produce it. And in order to emphasize this fact it appears to be time to classify these causes more accurately, and to call attention to some which are unusual. This is not the first attempt at such a classification, for in 1887 in the Middleton Goldsmith Lectures cases were divided into toxic, infectious, epidemic, and due to uncertain causes. Gowers in the second edition of his text-book on Diseases of the Nervous System, 1892, classified the cases into (1) toxic, (2) toxemic, (3) endemic, (4) rheumatic, and (5) cachetic and senile, and Remak, in Nothnagel's *Specielle Pathologie und Therapie*, Vol. XI., has adopted a somewhat similar classification. If these classes be taken as a provisional basis and the various causes which are known be studied, we may finally reach a fairly satisfactory series of categories to which the cases may be assigned:

I. Toxic cases due to the action of a poison derived from without the body. (1) Metallic: arsenic, lead, mercury, copper, phosphorus, and silver. (2) Non-metallic: alcohol, carbonic oxide gas, bisulphide of carbon, sulphonal and trional, the coal-tar products, and nitrobenzol.

1. In discussing these toxic agents I wish to call your attention to some which have not been commonly recognized, or rather to some unexpected means by which they may get into the system.

a. *Arsenic*.—It has long been known that arsenic can produce neuritis. Not infrequently persons who fail in attempts at suicide by taking arsenic suffer for a long time from the neuritis which develops after the attempt. Occasionally children who are being treated for chorea by arsenic show unusual susceptibility to the drug and develop neuritis. Neuritis may also be due to the inhalation of arsenic which is given off from wall-papers and furniture-covering, or from artificial flowers containing arsenical dye-stuffs. One of the most severe cases I have seen devel-

oped in a woman who, in order to avoid miscarriage, was confined to her bed during the first six months of pregnancy. To make her room attractive a new green paper and green cretonne furniture were put in which were subsequently found to be loaded with arsenic. In the third month her continued vomiting which had been ascribed to the pregnancy was followed by a rapidly-developing, painful paralysis in legs and forearms, the thighs and arms and body being exempt. A general brown pigmentation of the skin also appeared which was the symptom suggestive of the arsenical cause of her neuritis—a suggestion confirmed by the discovery of arsenic in the urine. As she had never left her room and had not been given during her illness any arsenic medicinally, there could be no doubt as to the fact that the arsenic had been inhaled from particles in the air.

It is not to be forgotten that many toilet powders contain arsenic and they may thus easily cause neuritis. But the most interesting fact regarding the possibility of arsenical poisoning was elicited about two years ago in the epidemic of arsenical poisoning from the use of beer in England.<sup>1</sup> It was noticed in November and December, 1899, in Manchester, Salford, Liverpool and the adjacent towns that a very unusual number of cases of neuritis were applying for relief to the hospitals. While these cases were at first regarded as alcoholic, the peculiar pigmentation of the skin and the numerous trophic symptoms, such as changes in the nails, which became ridged, thick, and brittle; erythema, acne, eczematous, papillary and herpetic eruptions, and thickening of the skin over the knuckles and on the palms and soles, with desquamation, soon suggested arsenic as a cause. Investigation revealed the fact that all the patients had drunk freely of beer from a few breweries, and certain of these beers were found to contain arsenic in the proportion of from 0.28 to 0.14 of a grain of arsenious acid to the gallon. Thus, a man drinking four quarts a day would get the equivalent of 30 minims of liquor arsenicalis. Chemical examination proved that the arsenic was derived from the glucose or invert sugar used in brewing, and not from any other of the constituents of the beer. The glucose contained four parts of arsenic to 10,000. Glucose, as is well known, is derived from corn or other kinds of starch by the action of sulphuric acid. Sulphuric acid is now manufactured from arsenical pyrites, and such acid is rarely free from arsenic. Hence the source of the arsenic in the beer. Prompt action by the legal authorities in England caused the destruction of thousands of gallons of this arsenical beer, and the epidemic ceased. The glu-

<sup>1</sup> British Medical Journal, Dec., 1899, and Oct., 1901.

cose manufacturers were alarmed at the danger and the American Glucose Company stopped entirely the use of sulphuric acid in the preparation of glucose, to avoid the danger. But the fact remains that unless care is taken in the manufacture of glucose and its use in beer such a neuritis may develop anywhere and at any time from similar cause. Last winter I saw at St. Vincent's Hospital two cases of supposedly alcoholic neuritis from beer-drinking (in one of which a bilateral facial paralysis occurred as an interesting symptom) attended by the characteristic arsenical pigmentation; and I am convinced that once this causation is suspected many cases will be observed. It may be well to state that the pigmentation is a dark brown in color which makes one think at first that the patient is an octoroon or a mulatto, but later may suggest Addison's disease. The pigment appears first on those parts of the body normally pigmented, the axillæ and groins and the nipples. It soon appears on the eyelids, on the abdomen and thorax and finally on the extensor surfaces of the arms and legs. The pigment is diffuse, but here and there little islets of normal skin give a mottled appearance to the surface. The mucous membranes are never pigmented, hence the condition need not be mistaken for Addison's disease. I saw last winter with Dr. A. H. Smith at the Presbyterian Hospital a man suffering from a most extreme type of neuritis, attended by the rare complication of paralysis of the diaphragm, in whom this pigmentation suggested arsenic as the cause of the disease. The urine was found to contain arsenic. This patient was attacked by paralysis in the mountains of Brazil, where he was working as an engineer. He had suffered from severe malaria and, in the absence of other causes, it was supposed that his malaria was the cause of the neuritis. He had drank a bottle of English beer daily for some months. He had taken large doses of quinine and some arsenic. It is still a matter of doubt which of these three causes produced his neuritis, for as we shall soon see the disease often develops after malarial fevers, and it is not impossible that large doses of quinine long continued may cause general neuritis, as it is known to cause atrophy of the acoustic nerve.

Sulphuric acid is used in so many of the arts and manufactures that it would be well for those who practise among such workers to be on the lookout for chronic arsenical poisoning. Arsenic is so commonly found in copper, and copper is now being used so widely in electrical construction, that it is not strange that workers in copper are often the subjects of arsenical poisoning. The presence of  $\frac{1}{200}$  of 1 per cent. of arsenic in copper renders the copper useless for many electric purposes. The arsenic is extracted by heat, going off in fumes. In factories where these fumes have been conducted to a height of 250 feet by tall chimneys, the workmen about the copper works constantly present arsenic poisoning, the particles dropping from the gases, be-

ing scattered all over the adjacent buildings, getting into the air and so being inhaled. I am told that these workmen are often attacked by paralysis, from which they gradually recover. It seems likely that this paralysis is really an arsenical multiple neuritis.

*b. Lead.*—The frequency of lead-palsy, which is always a form of multiple neuritis, and the widespread knowledge of its origin among painters, plumbers, typesetters, and workers in lead toys makes it unnecessary to devote time to its consideration. It may not be so generally known that laborers who produce china, earthenware glazes, and fritted glass are equally liable to lead-poisoning. In the midland counties of England, in Limoges, France, and in Dresden and Prague, neuritis from this cause among these workmen is very common.<sup>1</sup> It would be well for those who practise in Trenton, N. J., Cincinnati, and Denver to watch for such cases in the factories where similar products are turned out.<sup>2</sup> It seems to be well admitted that persons addicted to alcohol are more liable to lead neuritis than are the temperate. The possibility of a contamination of water by lead from lead pipes is never to be forgotten. Old pipes become lined with soluble salts of lead which may render the water which is allowed to stand in the pipes quite poisonous. Thus, cases are reported of servants who have drank the water first drawn from a faucet in the morning, without letting it run a while, and have thus been poisoned. It is interesting to know that horses are subject to lead-palsy.

*c. Copper.*—Allusion has been made to the occurrence of arsenical neuritis in those who are busied in extracting arsenic from copper. But copper itself may be the cause of neuritis. Suckling has called attention to a form of multiple neuritis developing in brass-workers in England, and in this country Walton and Carter have confirmed his observation. This fact requires emphasis for such cases will probably be found if looked for in those localities where copper is burned or worked.

*d. Phosphorus.*—Henschen has seen cases of both mild and severe types of multiple neuritis following poisoning by phosphorus. It is not unlikely that this may be the origin of many nervous symptoms to which those who work in match factories are peculiarly liable. But further investigation is needed to establish the existence of neuritis.

*e. Mercury.*—The various types of paralysis attended by tremor due to inhalation of fumes of mercury are now rarely seen, though formerly when looking-glass was manufactured by the

<sup>1</sup> In a report of the effects of lead upon lead-workers in the Staffordshire potteries, Dr. Shuttleworth of Newcastle-on-Tyne found that but few workmen were affected (Lancet, Oct. 26, 1901); but in the Inspectors' report (Lancet, Oct. 12) it appears that, of 8,627 individuals employed in earthenware and china industries in 1900, 293 suffered from lead-poisoning, i.e., about 3 per cent. the greater part of whom were poisoned by inhaling dust laden with lead.

<sup>2</sup> It is interesting to know that the lead in the glaze which lines so many agate pots and dishes used in cooking may be dissolved out by the acids and fats in food and thus may cause lead-poisoning. Some such cases have recently been reported in England.



older methods they were very common.<sup>1</sup> The lesion in such cases was a multiple neuritis. I have seen several patients suffering in this manner. Fortunately, the newer method of precipitating the mercury on the glass by electrolysis does not expose the workmen to the fumes. I have never seen the medicinal use of mercury cause a multiple neuritis.

*f. Silver.*—The only case of neuritis ascribed to silver-poisoning is recorded by Gowers. His patient had taken silver pills for years for cancer from which he subsequently died; he had the blue discoloration caused only by silver and the silver was the only assignable cause for an undoubted case of paralysis of the type of lead-palsy.

2. Poisoning by non-metallic substances is much more common than by those already considered.

*a. Alcohol.*—The vast majority of cases of multiple neuritis seen in private and in hospital practice are traceable to alcoholic excesses. It was formerly supposed that whisky, brandy, gin and rum and the liqueurs were the only forms of drink strong enough in alcohol to cause neuritis. They are certainly the usual cause of the disease. But further observation has shown that in some persons susceptible to alcohol, red and white wine, or even ale and beer may produce the disease. It seems that this susceptibility may be manifest not as a mental one merely, but also as an inherent weakness in the nerves. We recognize that undue elation, talkativeness, egotism, or combativeness may appear in certain persons under small amounts of alcohol which fail to affect other individuals at all. Is it not probable that persons may show similar variability of effect of the drug in the nerves as well as in the brain-cells? I have been surprised to find how free some are from alcoholic nervous symptoms after long and steady and copious habitual drinking. I have also been surprised to find what small amounts of liquor or even beer will in others cause serious neuritis. I have seen a case of severe multiple neuritis in a child of three years whose mother gave her a "sup of beer" once a day at dinner. It is never to be forgotten that many substances contain alcohol and if taken may cause neuritis which might not be suspected. One undoubted case of alcoholic neuritis in a man who prided himself on his temperance record was traced to a patent remedy which he had long taken almost daily for so-called dyspepsia. He had found it necessary gradually to increase the dose and he was taking about eight ounces daily of this nostrum. Analysis showed it to contain 70 per cent. of pure alcohol. In the case of a woman whose symptoms were typical, and whose indignation at my questions regarding concealed

drinking was shared by all her family, careful observation elicited the fact that she was sipping cologne, and consumed about six ounces a day. It is to be remembered that the inhalation of alcohol is more rapid in its effects and equally deleterious as its absorption by the stomach. Those who work in drug factories in all manufactures where alcohol is used and where its fumes may be inhaled are liable to neuritis. For it is the constant absorption of small amounts, keeping the system continually under the influence, which is more likely to cause neuritis than are occasional large doses.

Males are actually the victims more often than females. Thus, of 250 cases which I have seen or collected, 89 only were in female. But when the far greater prevalence of drinking among men is considered it is evident that the disease is relatively far more frequent among women. It is likely that a sedentary habit predisposes to it and hence active workers, male or female, though taking an equally large amount of liquor as does the luxurious lazy drinker, escape. I think that neuritis is more commonly seen among the higher classes and in those whose nervous organization is more highly developed than in the lower or coarser types.

I would also call attention to the existence of a chronic alcoholic multiple neuritis in mild drinkers, characterized by numb extremities, occasional neuralgia, a general enfeeblement of the muscles, and edema of the feet, which may persist for years and never go on to actual paralysis or ataxia. These cases have not been recognized or mentioned in the books.

*b. Coal Gas.*—When inhaled coal gas may cause a severe type of sensory neuritis. Two of the most obstinate cases I have seen were in patients who barely survived the experience of sleeping in rooms where the gas was turned on. It is not generally known that natural gas may produce the same effect. In the case of a man from Peru, Ind., three successive attacks of the disease were definitely traced in the absence of all other causes to his exposure to inhalation of natural gas both in his house and in his office. And I am told that neuritis has increased in Pittsburg during the last few years since natural gas has been extensively used as a fuel. There is little effort to save this gas and complete combustion is not always obtained. Hence it gets into the air of badly-ventilated rooms and is inhaled. I have seen several cases from cities in the Middle States, where natural gas is freely used, which have been there considered neurasthenic but which were really cases of chronic multiple neuritis, and possibly due to this cause.

*c. Sulphide of Carbon.*—This substance is present in rubber and multiple neuritis developing in workmen in rubber factories has been traced directly to it as a cause. The fumes from heated rubber or the dust containing particles of rubber are inhaled or get into the mouth and nose and are then swallowed, causing a chronic

<sup>1</sup> In the report of the Chief Inspector of Factories and Workshops in Great Britain for 1900 (Lancet, Sept. 28, Oct. 12 and 26, 1901) it is stated that few cases of mercurial poisoning were discovered. These were chiefly among manufacturing chemists who produced calomel, corrosive sublimate and red oxide, all of which are made by volatilizing the metal. In the making of both chloride of mercury is used for the preparation of the fat and workers here employed.

poisoning. The symptoms are at first those of general anemia and disturbance of digestion, headache, inability to fix the attention or to remember, and many functional nervous symptoms suggestive of hysteria follow. Finally symptoms of multiple neuritis either of the paralytic or of the ataxic types develop, causing long and serious illness. Such cases have been rather widely observed abroad, but have not been recorded in this country. They are most completely described by Laudenheimer.<sup>1</sup> Inasmuch as our rubber industry is becoming very extensive, since the introduction of rubber tires, it may be worth while for those who come in contact with employees in the rubber factories to be on the lookout for these cases.

*d. The Coal-Tar Products.*—Antipyrin, acetanilid, sulphonal and trional, chloretone, and other coal-tar products are so widely used as medicinal agents that much interest has been awakened by recent statements that they are capable of causing multiple neuritis. I think we have all seen nervous symptoms caused by over-dosage of these drugs. The cardiac weakness and cyanosis are probably due to paralysis of the vagus nerve. The marked relief of pain is often attended by numbness of the extremities and feelings of weakness. It has been affirmed that the long-continued use of antipyrin, acetanilid and phenacetin has been the cause of multiple neuritis. I have not seen such cases; but Remak, who has reported one case, is a most accurate observer. I have seen a case of acute sulphonal-poisoning, in which the patient took 120 grains of the drug within three hours. She slept two days, being during this time very cyanotic, with weak, rapid pulse, 120, and slow, shallow respiration. For three weeks after this she suffered from paresthesia of the extremities and from weakness and ataxia of the hands and legs, with extreme tenderness along the distal parts of the nerves, symptoms easily referable to a mild neuritis, and not unlike those seen after alcoholic or coal-gas poisoning. Dr. Stuart Hart has recently reported<sup>2</sup> a case of trional habit followed by multiple neuritis. As I saw this patient, I can confirm his diagnosis; and, in view of the probable exclusion of other causes and of the fact that he has been able to find other cases similar in kind in the literature, I think we must admit that trional if long taken in large dose may produce neuritis.

Ross called attention to cases of multiple neuritis occurring among miners who use roborite (dinitrobenzol) and also to cases occurring in factory workers who use the anilin dyes and oils. We all know of the relative action of methylene blue upon the nerves in the laboratory and of the recent attempts—not very successful—to introduce this dye into the Pharmacopœia, as a remedy for neuralgia. It is not unlikely that Ross' observation will be confirmed if the dyes are known to be a cause of neuritis.

I fear that I have taken too much time in the consideration of these toxic cases of neuritis. But it has seemed to me necessary, for I wish to emphasize our duty as physicians to protect the workmen who are ignorant of these dangers attendant upon their employment. In many industries it has been found needful to insure healthful surroundings by legal enactment. The restrictions have resulted in the banishment of many forms of chronic poisoning. If it is necessary to call attention to further danger to the working class it is surely our duty to realize these dangers. Hence, as new perils are discovered, we should investigate their effects and if needed devise appropriate remedies.

II. We turn now to the second class of cases of multiple neuritis, viz., toxemia from infection. In this class are included all cases due to the development and action in the organism of some bacterial poison either of external or of internal origin. Multiple neuritis is known to occur as an accompaniment of, or as a sequel to, diphtheria, severe pharyngitis, the grippe, typhoid, typhus, malarial and scarlet fevers, measles, mumps, whooping-cough and smallpox, pneumonia, erysipelas, gonorrhea, puerperal fever, septicemia of any origin. We may include in this class the epidemic form known as beri-beri and also leprous neuritis. The literature upon the subject of these various cases of multiple neuritis has increased enormously within the past ten years. In the volume of Nothnagel's *Specielle Pathologie und Therapie*, prepared by Remak on neuritis, several hundred articles are cited. There can be no doubt whatever that the majority of cases of paralysis, of severe painful affections, and of vasomotor disturbances which have been recognized as complications of these infectious diseases are due to multiple neuritis. They have all the characteristics of that affection and like it they usually terminate in recovery in the course of time. Many cases are limited in extent to one or two nerves. Others are widespread, involving many nerves, but all can be traced to some toxic agent of infectious origin. In some cases the neuritis occurs during the course of the infectious disease. In the majority of cases it develops later as a sequel, due in all probability either to a toxin left in the blood, or to the fact that the nerves resist for a long time the action of a toxin which finally overcomes them.

I cannot do more than enumerate these causes, but in passing I wish to remark that since the use of antitoxin in diphtheria the number of cases of diphtheritic paralysis is decidedly less. I wish to emphasize the frequency of neuritis following grippe. I have observed all the various types, the paralytic, the painful neuralgic, the pseudo-ataxic and the vasomotor type, and I find recovery in these cases to be very slow. I have thought that many cases following typhoid might be explained as alcoholic in origin, since stimulants are used very freely and have been particularly needed in many cases which subsequently showed neuritis. The ordinary forms of malaria as seen here rarely

<sup>1</sup> Die Schwefelkohlenstoff-vergiftungen der Gummiarbeiter. Leipzig, 1899; also E. Kleiter, Arch. für Psych., xxxiii, 3.

<sup>2</sup> American Jour. of the Med. Sci., April, 1901.



are followed by multiple neuritis, but the severer types seen in the tropics, dengue fever especially, are liable to cause neuritis. I have already seen two bad cases sent home from the Philippine Islands. Foreign observers have seen cases following the children's fevers named, but they are certainly rare in this country. Sufficient attention has not, however, been paid to the cases traceable to septic conditions and to gonorrhea. A long-continued suppuration in a tooth, in the ear, in the nasal cavity, or any collection of pus, or gonorrhea, and the condition of the blood which leads to a series of boils or carbuncles are certainly competent causes of multiple neuritis. It is not well to assign the case to the category of unknown causes until these factors are wholly excluded.

It has seemed very probable to several authors that some of the cases of neuritis hitherto classed among cases of unknown origin are really due to an infectious agent. These cases show many characteristics of an acute infectious disease. They begin with chill and fever, a temperature of 103° F. having been often recorded, and with all the accompanying symptoms of an acute febrile movement, viz., malaise, gastro-intestinal irritation, headache, profuse sweating, rapid pulse, catarrhal states of the pharynx, larynx and bronchi, dark heavy urine, and a swelling of the spleen. The latter symptom has been considered by Strumpell, Caspari and J. J. Putnam as proof positive of an infectious origin of the disease. It should be looked for in any case. The pain in the joints which attends these cases has led to their being considered rheumatic, but this I think is erroneous.

Beri-beri or kakke is a form of neuritis of which we are likely to see many cases, especially on our Western coast, since our acquisition of the Philippine Islands, in which it is always endemic and often epidemic. No positive proof has yet been offered of its origin from a micro-organism, though several investigators claim to have discovered a characteristic bacillus. Many believe it to be due to a diet in which rice predominates, and it is a fact that the Japanese Navy has been quite free from the disease since its diet-sheet has been extended and made to include meat, green vegetables, and fruit. But this diet theory is discarded by Scheube,<sup>1</sup> who adheres to the infectious theory of the disease.

III. The third class of causes of multiple neuritis is allied to the second class, for while not truly toxemic or infectious it is a class which Remak terms dyscrasic. There are certain diseases the presence of which in the system predisposes it to nervous affections and among these affections it is now necessary to include multiple neuritis. Some of these diseases are in themselves of bacterial origin. Thus, tuberculosis is surely and rheumatism possibly so. Others are due to disordered states of the blood consequent

upon some inactivity in other organs. Thus, diabetes, gout, and rheumatism are conditions which notably predispose to neuritis. Carcinoma, arteriosclerosis, and the senile condition are also known to incline to the development of neuritis. Hence, we can form a class of cases of neuritis which is to be traced to some other disease present in the body. In tuberculous patients the multiple neuritis is not due to the invasion of the nerves by the bacillus, for most careful postmortem investigation has never revealed its presence in the nerve-sheaths; but the lowered vitality of the patient seems to impair the nutrition of the neurons, which suffer first in their extreme peripheral parts so far removed from the nutrient center in the cell-body.

In rheumatic patients a coincidence of acute articular rheumatism and acute multiple neuritis is too common to be an accident and in either condition the other is extremely liable to occur. Hence, we have to admit a rheumatic variety. The Germans speak of the form of neuritis due to exposure to cold as "rheumatic." That such exposure is a sufficient cause is admitted. One of the worst cases I have seen developed in a man who, while asleep under a tree, was suddenly drenched by a shower and severely chilled. The next day he was paralyzed and had all the symptoms of multiple neuritis for several months. The condition produced by a draft of cold air or by exposure to cold is one which causes either immediate changes in the blood or peculiar susceptibility in the body-cells to the action of otherwise innocuous agents in the blood or to extraneous poisons of bacterial or of some other origin, and this must be admitted as a cause not only of neuralgia, of local neuritis like facial palsy, but also of multiple neuritis.

In diabetic patients localized mononeuritis is a very common occurrence. All authorities have emphasized this fact. But, while neuralgia, ulnar neuritis, crural and sciatic neuritis, etc., are frequently observed, general multiple neuritis is seldom seen. Leyden, Raymond, Buzzard and Charcot have described the only cases not open to criticism. I have never seen such a case.

In gouty patients also mononeuritis is far more common than multiple neuritis; in fact, but a few cases of the latter have been recorded. I have seen one case which deserves to be cited because of its unusual features.

The disease began with a severe itching and burning sensation about the toenails and upon the dorsum of the right foot, which soon developed in the left foot also. This itching and burning sensation soon extended up both legs to the knee, but was not at first attended by any change in the appearance of the skin or by actual anesthesia. After several remissions the symptoms became more intense and the burning and itching were accompanied by the appearance of a crop of minute vesicles. The feet then became swollen, the skin became glossy, red and extremely tender to the slightest touch and the sensation was one of great pain throughout both lower ex-

<sup>1</sup>Scheube. Beri-beri, Jena, 1894; and Die Krankheiten der Warmen Lander, 1899.

tremities. Any moist dressing upon the surface intensified the pain, but dry dressings or oily applications seemed to give relief. Large serous blebs formed upon the soles of the feet and about the toes, and there were considerable eczematous exudation and a scaly appearance of the skin of the entire legs. After this condition had lasted for three months similar itching and burning began in the hands about the fingers with very marked deep-seated paresthesia. Fine vesicular pin-point elevations in the skin of the hands also appeared, but these did not go on to the formation of blebs as in the feet. After two months the skin of the legs had become thickened, cracked, and shiny with crusts all over the surface, and when these had peeled off the surface was red and very sensitive to light pressure. The nails of the toes were thickened, rough, striated and black. It was said that they had not grown at all during six months. Tactile sensibility was diminished over both feet and both legs, but any touch was attended by great pain. The muscles of the feet and legs became extremely atrophied and were almost entirely paralyzed; no electrical examination could be made on account of the extreme sensitiveness. At this time sciatica as high as the buttocks was complained of. The knee-jerks, at first exaggerated, were subsequently lost.

When I saw the patient, a woman of about fifty years of age, with Dr. W. H. Draper, seven months after the onset, she was unable to stand or to bear her feet upon the floor, but the paralysis had subsided and she could move her ankles, but could not move her toes. There was very marked tenderness to touch over both legs and upon both feet, and the tenderness upon the nerves on the soles of the feet was extreme. The skin of the feet was dry, scaly and cracked. The nails were badly discolored, ridged and dark and rough, excepting near the matrix, where a new growth of normal nail, about one-half inch in depth, had begun. Any covering applied to the feet caused intense burning and itching, so that she kept the feet entirely uncovered both day and night. There was nothing in the way of local treatment that relieved this itching and burning, though every form of local application had been tried. The ball of the foot was red, the rest of the foot white, but during an attack of pain the feet became scarlet, or sometimes became very much more pallid than usual. It was evident that the condition in the feet was that of erythromelalgia.

A similar burning sensation and itching were felt in the hands from time to time, but there was no apparent malnutrition of the skin.

The patient came of a very gouty family and had many indications of the presence of gout, and all these symptoms gradually subsided in the course of a year, under treatment directed exclusively to the gouty state, namely, dietetic treatment and alkalis given freely. The coal-tar products appeared to give some little relief to the local symptoms. I have seen the patient

several times in the past five years and there has been no return of the affection.

I have seen several other cases that are quite similar to this in their symptoms and course and have no doubt that they can be classed together as gouty neuritis.

In carcinomatous patients, as in the tuberculous, any form of neuritis is to be traced to the general malnutrition. In old people, especially in those who are the subjects of arterial atheroma and sclerosis, general neuritis is responsible for many symptoms of feebleness and paralysis. Some of the cases described as senile paraplegia are undoubtedly cases of multiple neuritis. And the mere establishment of the cause should not in these cases lead to too serious a prognosis. I have watched a case this summer in the practice of Dr. R. B. Kimball, in which a gradual recovery from a state of total paralysis of both arms and both legs has ensued, although the patient was seventy-six years old, was the victim of a chronic arthritis deformans, and had extensive gangrene of one leg as a complication. It was interesting to observe that the rigid deformities due to the arthritis were relaxed during the course of the paralysis, but returned as that disease passed off. Oppenheim and Schlesinger have also seen gangrene as a complication of senile neuritis and regard it as very serious in old persons. In this case skin-grafting proved successful in spite of a very deep slough as large as one's hand.

The question of the existence of a syphilitic multiple neuritis has been raised and was recently discussed before the New York Neurological Society. The members agreed that they had never seen such a case and it is probable that syphilis does not enter as a causative factor in general multiple neuritis, though it may be the cause of local gummy swellings in the nerve-trunks. Cestan<sup>1</sup> has recently reported two cases and has found five others in the literature.

IV. Lastly we have to admit in many cases of multiple neuritis that no cause can be discovered. These are still termed "idiopathic" cases, but as the knowledge of the causes of the disease increases this class diminishes. I have already suggested that some cases formerly considered as belonging to this class are really infectious in nature. I would suggest that some still so considered are really due to auto-intoxication from the products of gastro-intestinal fermentation. Such a toxemia is now admitted as a cause of many serious nervous symptoms, of chronic recurrent headaches, of many neuralgias, of convulsions. May it be a cause of neuritis? There are cases of an acute general paralysis sudden in onset, transient in character, rapid in recovery, presenting the peripheral character of neuritis lacking evidence of central lesion. Such cases observed by Westphal, by Holt, by Mitchell, are too well authenticated to be disregarded. They point to a sudden suspension of function of the peripheral nerves under the form of intoxication.

<sup>1</sup>Nouv. Icon. photo. de la Salpêtrière, xlii, p. 123.



They do not always go on to neuritis, but they may so terminate. Possibly these cases, like cases of migraine, may be due to some poison in the blood produced within the body. If so, these cases must be transferred to the toxemic class. I do not think we can pay too great attention to searching for the cause in these cases. Yet that some baffle an inquiry is illustrated by the following case:

A. A. B., born in 1877, a young man of healthy parentage and of fine general physique; without any history of specific disease or of any bad habits, was sent into the Presbyterian Hospital on October 7, 1897, being then in a state of general motor and sensory paralysis involving all the limbs.

His first illness of any severity was a similar attack of general paralysis which occurred in 1892. In the summer of that year, while living a healthy out-of-door life, not drinking at all, and taking no drugs, he noticed a clumsiness of his hands, a tendency to drop things, and a feeling of unusual fatigue in his legs, which was soon followed by inability to stand on his toes. These symptoms were not attended by pain nor by any general constitutional disturbance. They increased, however, very rapidly to the point of absolute paralysis, and in three weeks after they were first noticed he was unable to use his hands to feed himself, or to walk or to stand alone. His control of his bladder and rectum remained normal, and except for his muscular weakness and a sensation of numbness in his limbs he felt well. He was sent for treatment to a sanitarium, where he remained for three months, but as he did not improve he was then, in October, 1892, taken to St. Luke's Hospital, where he was examined by the late Dr. Walter Vought and by me. At that time he was found to have a total paralysis of all the muscles below the knees and elbows, with considerable atrophy in these muscles, and a loss of faradic excitability. The reflexes were absent in the paralyzed muscles. The muscles of the upper part of the limbs were also weak, but voluntary motion was not suspended. Such motion, however, as was possible was ataxic and uncertain. The trunk muscles had not escaped, and he was unable to turn in bed or to sit up. There were partial wrist-drop, complete foot-drop, some tenderness along the muscles of the calves and of the forearms, but no sensory disturbance of any kind.

Under general tonic treatment with massage and electricity to the paralyzed muscles, he soon began to improve, and, after a month, was able to go home, though he still could not stand alone or feed himself. His recovery was, however, continuous and rapid, and in June, 1893, he reported that he had regained complete power in all his muscles, and was quite well except for some shaking of his hands (ataxia?) at times.

In August, 1894, he was readmitted to St. Luke's Hospital in about the same condition in which he had been on his first admission. The second attack had begun in July, and had gone

on rapidly to almost total paralysis, again without pain or sensory disturbance save some numbness, and without any affection of the bladder or rectum. He was seen by Dr. Peterson in August, 1894, and by me in September, and we agreed upon the diagnosis of a multiple neuritis, but were unable to ascertain any cause. His progress to recovery was slow but continuous. In November he was able to leave the hospital, and in April, 1895, he reported himself as having regained complete power in all his muscles, though he complained of some formication and tremor in the right arm and hand. This gradually passed off.

On September 20, 1897, he presented himself at my office and complained of some numbness of his fingers and toes, of an awkwardness in fine motions, and a feeling of weakness in the hands and fatigue on walking far. I found a slight anesthesia to touch, cold and heat and pain in the fingers, a decided weakness of the interossei of the hands, but no other symptoms of disease, careful examination of every organ being negative, and his appearance being that of a young athlete well developed in every respect. We were both, however, alarmed at the prospect of a return of his paralysis, and he consented to a life of quiet and of care in diet, with the use of strong nerve tonics and of cod-liver oil. But these precautions were of no avail, and in the course of a month he had developed an absolutely total paralysis of all the muscles of the extremities with rapid atrophy and loss of faradic reaction. The trunk muscles and muscles of the head and neck were also invaded. He could not sit up or turn in bed. His external ocular muscles were weak, so that he had a slight internal strabismus, and saw double. His speech was noticeably thick and pronunciation was imperfect, and soon after his admission to the hospital deglutition became affected, so that he could swallow only with great difficulty. Then his respiration became suddenly unnatural, and it was found that there was no spontaneous action of the diaphragm. For two weeks his respiratory movements were wholly of the type seen in volitional labored breathing, and during this time he slept little, as respiration became uncertain and irregular when the conscious effort ceased. His pulse at this time was extremely rapid, but never intermittent or irregular. His bladder and rectum were always under perfect control. His mind was always clear and his courage good. Preparation was made to maintain artificial respiration, if needed, but this was never necessary. After two weeks the respiratory motions seemed gradually to become more natural, the diaphragm began to work again at night during sleep, and after a month its action at all times was natural. During the following month, after the improvement set in, it advanced rapidly in all the muscles, the muscles of the trunk and near the trunk regaining their power sooner than those of the distal parts of the extremities. It seemed safe to allow him to go

home November 25th, and he reported a steady improvement. At the height of his paralysis there was an anesthesia to touch, temperature and pain as high as his elbows and knees, but not in his face or on his trunk. The special senses were normal. He has had no recurrence during the past four years, and is at present in perfect health.

I have not found recorded many cases of recurrent attacks of neuritis. Leran, however, has published the history of one patient who had suffered from nine attacks in successive years, no cause being found.

This finishes the list of causes thus far determined. It must, however, be added that in some cases of neuritis a double causation may be ascertained. Thus, it is well known that alcoholic subjects are more liable to arsenic- and lead-poisoning than non-alcoholics. It has been observed that alcoholic neuritis often develops in an individual subsequently to an attack of the grippe, typhoid or other infectious diseases, though the amount of alcohol taken is not increased. Hence, it is not wholly sufficient to ascertain one cause in a patient, and we should not be satisfied that we have determined the exact etiology of the affection in any patient until we have elicited every possible factor in the case.

#### CRIMINAL ABORTION.

BY E. STUVER, M.SC., M.D., PH.D.,

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I BELIEVE that the distinction between the terms abortion and miscarriage should be made on moral and ethical grounds rather than be determined by the length of time pregnancy has continued, as has been heretofore done. I would, therefore, define abortion as the deliberate and intentional interruption of pregnancy before viability of the fœtus has been attained.

Every physician in active general practice will, I believe, bear me out in the statement that this dread crime is widespread among all nations and people; that it has invaded all ranks and classes of society from the highest to the lowest; that it is not confined to the criminal classes alone, but has penetrated the most exclusive abodes of luxury, splendor and fashion, and has even been admitted to the homes of those active in church and religious work, and supposedly surrounded by a halo of sanctity. My remarks shall have no reference whatever to those rare cases in which, in order to save the life of the mother, it is necessary to sacrifice the child, but I do desire most emphatically to insist that in all cases in which such a condition exists the attending physician call to his aid and assistance one or more competent physicians in good standing, not only for his own protection, but in order to impress upon the family and the community the seriousness and gravity of such an undertaking.

In order to appreciate the far-reaching conse-

quences of this widespread crime, let us consider some of its physical, mental and moral effects on the individual and upon the race.

When one considers the lives destroyed by the abortionist the life losses of the Spanish-American and Boer wars pale into insignificance; but such evils are of comparatively slight importance beside the obtunding of the moral nature, the turpitude and race degeneracy consequent on this most insidious and degrading of all crimes. These truths have long been appreciated by the conscientious and thinking members of our profession. The late lamented and brilliant Dr. J. T. Whittaker, in an address (*Journal of the American Medical Association*, April 11, 1896, p. 700), spoke as follows: "Physical corruption is never so bad as is moral corruption. All history shows that though a plague may devastate, it is immorality alone that can destroy a nation."

Rome fell not because of the plagues, not because of the Goths and Vandals, but because of the failure in the crop of Roman children."

If failure in the crop of children is a sign of national decay and degradation, then surely the so-called progressive civilized nations are on the down grade. According to the latest census reports, there has been a decided falling off in the birth-rate of the principal European countries, not only in France, of which decrease we have heard so much, but also in England, Germany, and among other leading nations. The same thing is true to an alarming extent of our own country, especially in the American element or the old native stock; and, were it not for the fact that there is a constant influx of foreigners and a high birth-rate among these people, our rapid increase of population would suddenly cease.

As to how great an influence abortion has exerted in lowering the birth-rate in our own and in other countries, none can speak definitely, but when we consider the number of young lives sacrificed every year and the immense amount of disease and sterility following this infamous practice, I believe I am justified in claiming that abortion is a prominent factor in the retardation of national growth and an insidious cause sapping our physical, mental and moral strength as a nation. War, by destroying the young, strong, vigorous and robust, and by allowing the old, weak and diseased to propagate their kind, lowers the strength and vitality of a nation. This truth is vividly shown by the loss in stature and in the physical degeneracy of the French people since the Napoleonic wars, and to a less marked extent in our own country since the late Civil War. Abortion, by killing, crippling and sterilizing many of the strong and vigorous young women, has an effect analogous to that of war, and necessarily produces more or less national and race degeneracy.

The truth of Pope's forceful lines,

"Vice is a monster of so frightful mien  
As to be hated needs but to be seen,  
But seen too oft, familiar with her face,  
We first endure, then pity, then embrace"—



could nowhere find a stronger confirmation than in connection with the degrading effects of criminal abortion on the moral nature. Many women, who in other respects are esteemed for their beautiful traits of character, their graces both of mind and of body, who are the bulwarks of church and society, who are actively engaged in philanthropical, educational and other good works, when brought face to face with this condition will resort to all kinds of sophistry, subterfuge, to any means whatsoever to induce the physician to murder their unborn offspring. While heretofore there has been a widespread indifference on the part of the public, and even of our courts, as to the importance of this matter, I am glad to note recently a more thorough appreciation of the gravity of the offense by some of our highest State courts. The Supreme Court of the State of Idaho, in the case of the *State vs. Alcorn* says: "An unnatural abortion, brought about by means of drugs or instruments, violates the Divine law, the law of Nature, decency, the best interests of society, the criminal statutes of the State, and not only is destructive of a life unborn, but places in jeopardy the life of a human being, the pregnant woman." This court also holds that "where an unnatural abortion is sought to be caused by the use of instruments or drugs and death results, an abortion not being necessary to save the life of the woman, such acts under the statutes constitute the crime of murder in the second degree." (*Journal American Medical Association*, July 6, 1901, p. 61.)

The question naturally arises, What can be done to prevent the perpetration of this crime, and to obviate its physical and moral evil consequences? Before we can correct an evil, we should have a clear conception of the causes which produce it. As I have indicated in a previous article, entitled "How Can We Prevent the Slaughter of the Innocents?" printed in the *Charlotte Medical Journal*, February, 1898, I believe the principal causes are as follows: (1) Hereditary vestiges of pre-existing savage or barbarous instincts and practices. (2) Ignorance of the biological fact that from the moment of conception the developing embryo contains all the potential powers of the fully-developed individual. (3) Apathy, or a spirit of *laissez faire*, on the part of the great majority of the people. (4) Incompetence on the part of legislators to comprehend the true significance of the subject, and the consequent futility of the laws enacted by them to prevent the crime of abortion by adequate punishment thereof. (5) The inability, or disinclination, of judges to appreciate the rights of the embryo as an individual entity during the early stages of its development. (6) The ignorance, or disregard, of the subject on the part of teachers, ministers, druggists, and physicians, and the frequent complicity of the two latter classes in the perpetration of the crime. (7) Ignorance of the physical dangers and the moral degradation inseparably attendant on this offense.

*Prevention.*—The question naturally arises,

How can this evil be prevented, or at least mitigated? In the first place, every true physician should be aroused to a keen appreciation of the moral and professional importance of this subject, and he, in turn, should strongly impress upon every one who applies to him for such service that, from a biological standpoint, the operation, unless absolutely necessary to save the mother's life, is plain, simple murder and cannot be extenuated in any manner whatsoever. At the same time, the terrible physical evils which may and do frequently follow should be strongly impressed upon the mind of the applicant and the moral infamy of the offense seared into her very soul, if such a thing be possible. Then, too, every medical society in the land should set the seal of its emphatic condemnation on this offense, and should ignominiously expel any physician guilty either of its perpetration or of connivance thereto. Every physician should be given to understand that he dare not produce abortions upon prostitutes, or upon those who, for convenience or social indulgences, would violate Nature's laws, and at the same time retain his position as an honorable professional man or woman.

Nor is it sufficient that the physician merely occupy the negative position of refusing to perform such operation. He should embrace every fitting opportunity to impress its importance upon others. Legislators and judges should be taught the biological facts on which life rests, so that laws may be framed and decisions rendered in accordance with the necessities of the case. Ministers should, likewise, be instructed and aroused to an appreciation of the enormity of the crime and its devastating consequences. Their calling affords them many opportunities to point out vividly the physical dangers and moral turpitude of the offense. They are in a position to do much good, and their sympathy and co-operation should be secured in overcoming the evil. Teachers in our higher institutions of learning can, by instilling correct moral principles into the minds of students, do much toward preventing this baleful practice.

Finally, laws, with severe penalties for their contravention, should be enacted prohibiting newspapers from advertising and druggists from selling abortifacient remedies, except on prescription of properly-licensed physicians. Such laws, if properly enacted and rigidly enforced, would, I believe, prevent a great many of these crimes, and have a very salutary effect in awakening the people to the enormity of this offense.

*Unique Case in Bankruptcy.*—A petition in involuntary bankruptcy has been filed against Samuel Jacobi of 1595 Broadway by the following creditors: James E. Kelly, \$500; Alexander Strong, \$500, and William H. Bates, \$125. The creditors are physicians and their claims are for medical attendance and expert testimony. This is said to be the first instance of the kind in which three physicians have appeared as creditors.

# ON THE USE OF THE OPIATES, ESPECIALLY MORPHINE.<sup>1</sup>

BY OSCAR C. YOUNG, M.D.,  
OF CHARLESTOWN, N.H.

I AM induced to write a short paper on the rational uses of the opiates, partly because I have been a patient and have suffered as intense pain as it is possible for any patient that any of you will ever be called upon to relieve from the tortures of physical agony, even if only temporarily, has ever suffered, and partly because there is a growing tendency to the extreme of treating human ailments by any and all other methods except by the administration of the common and well-tried remedies.

I will illustrate the latter statement by calling your attention to the abolition of the former practice of blood-letting for plethora and anemia, alike for protracted fevers and for pneumonia, without discrimination, and now when we should bleed for acute congestive conditions, or apoplexy, we do nothing of the sort. It is true that the practise of some, by the administration of aconite, belladonna or veratrum viride, of "bleeding them into their own veins," is a substitute for literal blood-letting, but as there has been such a great reaction to the opposite extreme, the former one in this practise, so is there a growing tendency to the abolition of the use of drugs. And if this is true of any drug—and I think none will deny that it is so—it is certainly true of the most potent pain-extinguishers, the opiates.

I am well aware that I differ in opinion from many and very able men in respect to the uses to which the opiates may be put; and if an expression of this opinion from any who may read this paper will lead to a fuller appreciation of their value, my object in writing this paper will have been accomplished.

Just a word to any who may have become extremists by abolishing drugs from their therapeutic armamentarium. Our remedies to-day are better understood and our knowledge of their rational uses is better appreciated than ever before, and the practitioner of medicine who fails to get results from the use of drugs in his cases, considered as a whole, has failed to appreciate the connection between the proper drug and the condition he is seeking to relieve. The chief cause for the reaction against morphine and opium is because a few decades ago it was given so indiscriminately by the general practitioner that many, very many, became addicted to its use; the habit was formed, and the person's life thus ruined; for of all narcotic habits, the alcohol habit included, I believe this habit is the very worst. Thus, the present generation has been so thoroughly warned, both by teaching at college and by observation, that now they are in many instances so very afraid to give it, even for the worst pain, that the patient suffers agonies worse than any hell for want of one-eighth of a grain of mor-

phine. And, on the other hand, it is sometimes used so indiscriminately that a dose is thrown into the patient for a common pain or ache which could be endured until a milder remedy would relieve the suffering; the latter, however, is not a common occurrence.

I believe it wiser to take a few minutes more in looking over our patients—and it won't take many more—and ascertain the cause of their suffering sufficiently to enable us to judge intelligently as to whether they need morphine hypodermically or whether a small dose by mouth will not be best, or if a dose of bromide or sulphonal for sleep will not suffice, or if an acetanilid compound tablet or one of the milder analgesics will not answer quite as well to relieve pain, if pain there be.

The present danger of the practitioner's inducing the habit in a patient is, I believe, overdrawn. It is true that it is one indulged in by a great many, but it is also true that the physician is not at fault nearly as often as formerly, for now we will not give it after we recognize that an analgesic or hypnotic is required for a much longer time than two or three weeks, and as a rule we do not tell what we are giving the patient.

Not long since I was called to an adjoining town to see a patient suffering intense pain. I inquired if he had ever taken morphine. The reply was, "Oh yes, Dr. T. gave it to me once. Dr. T. was a great fellow to give that, you know." But let me say right here that since the above Dr. T. left this town I have been there a good deal and have never found a morphine habitué. Why? Because he gave them something which stopped their aches and pains and then stopped.

**Untoward Effects.**—When opium is given to some persons it produces for some hours marked wakefulness followed by sleep, and in many patients it produces, after its primary effect has worn off, great nausea, followed in some instances by vomiting. The mental effect in some instances may be simply overwhelming. By far the best method of preventing these undesirable effects of opium or its derivatives is to administer  $\frac{1}{200}$  gr. of nitroglycerin at the same time that we give the opiate.

One of the chief causes of the nausea is the change in the body of morphine into oxy-dimorphine, which is eliminated into the stomach and there reabsorbed and then induces the secondary effects. It is also a fact that these symptoms can be largely done away with by giving at the same time 20 grains of bromide of potassium, and by using the preparations that are largely devoid of narcotine, such as the deodorized tincture or the deodorized opium itself.

The action of opium upon man and the lower animals varies with the degree of intelligence or cerebral development. It quiets the brain and excites the spinal cord. The dominant action is to produce nervous sedation in small doses and to induce sleep in larger amounts. Sometimes, however, in persons accustomed to its use it pro-

<sup>1</sup> Read before New Hampshire State Medical Society, 1901.



duces a state of restless insomnia or quiet, wakeful apathy. Small therapeutic doses have no effect on the circulation, but larger ones slow the pulse, increase its force, and slightly raise arterial tension—and here it is fitting to say that some object to giving one-eighth of a grain of morphine in severe cases of pleuropneumonia, with the most intense suffering at every breath, because of an imaginary depressing effect upon the heart.

I have in mind a case that ultimately terminated fatally, in which the physician asked the patient to bear the pain if possible, without the morphine; she did, until death released her. Think you that one or two hypodermics of one-eighth of a grain of morphine and  $\frac{1}{1000}$  of a grain of atropine in twenty-four hours would have hastened death? Not so, but it would have given such relief and perhaps aided in supporting the patient past the crisis by giving some rest.

In very minute doses opium is a feeble stimulant to the respiration, or at least not a depressant. In large doses or overdoses it is one of the most potent depressants and paralyzants of the respiratory center, causing death by this action. The bodily temperature is raised slightly by full doses and lowered by poisonous amounts of opium. It diminishes tissue waste. It is eliminated by way of the intestines and kidneys, but experiments have proven that most of it is destroyed by oxidation in the liver and tissues.

Morphine is chiefly eliminated by the stomach, and if in cases of poisoning by this drug the stomach is frequently washed out recovery is much aided by thus preventing reabsorption.

In ordinary amounts it diminishes peristalsis of the stomach and intestines by stimulating the splanchnic inhibitory fibers of these organs. In large doses it paralyzes and increases peristalsis—the latter producing diarrhea, the former constipation. Opium checks the secretion of every organ except that of the skin.

Opium is used for the relief of five conditions, (1) pain, (2) insomnia, (3) irritation and inflammation, (4) oversecretion, and (5) systemic strain.

Opiates are the best agents that we possess for the relief of all forms of pain, except possibly some forms of neuralgia which are relieved very readily by antipyrin or its fellow compounds, which excell the opiates because they have no bad after-effects; and still we always have in mind that its depressing tendency may be an objection to any coal-tar product. Still it is to be remembered that there is no agent so potent for the intense neuralgias as a hypodermic of morphine. There is one form of pain in which opium must not be used—cerebral congestion and cerebritis, for it will aggravate the trouble. In acute traumatic meningitis, however, it does good, either alone or combined with mercury in sthenic cases.

In the various colics, renal, hepatic, etc., nothing acts so well as morphine. In dysmenorrhea, morphine associated with belladonna relieves the

spasm of pain, and yet they so counteract each other that there are no after-effects sufficient to contra-indicate their use.

For the relief of all forms of intense pain in any disease under ordinary conditions, there need be no hesitancy in administering hypodermically a moderate dose of morphine. If the patient has a dread of the needle, or if for any reason it is thought best not to give it so, then give in hot water by mouth, with or without the addition of whisky or brandy. Or we may give deodorized tincture of opium—an excellent agent—in the same manner as the morphine, by mouth. If neither of these is desired, give the fluid extract or tincture of opium in starch-water by enema. If the pain is in the pelvis this last is the best method of administration. In violent sciatica, inject the morphine over the affected area.

In other cases of superficial inflammation, treat by applying locally lead-water and laudanum. But remember to be on guard about forming the habit in patients prone to repeated attacks of pain.

Upon inflammation opium seems to exert some influence not very easy of explanation; both large and small doses are of value upon inflamed serous membranes, as in meningitis and pericarditis. It allays the nervous cough following hemoptysis and quiets the excitement, and thus has the double effect of relieving the patient's fears and diminishing the danger of aggravating and causing another attack of bleeding. Whenever a cough is in excess, i. e., greater than is necessary to free the lungs from mucus, morphine may well be given in small doses, but if the number of râles increases by its use it must be stopped, as an increase of the number of râles indicates an increase in the accumulation of mucus.

In muscular rheumatism and immediately after a so-called ordinary cold, nothing is better than hot internal and external applications, and four or five hourly-doses of two grains of Dover's powder.

In serous diarrhea, diabetes insipidus and diabetes mellitus, and in the treatment of oversecretion of any secreting surface except the skin, opiates may well be used.

The employment of opium, morphine or codeine is a very valuable form of treatment for diabetes mellitus. Increase the dose very rapidly, as its effect is produced only by rapidly ascending amounts. Diabetic patients seem singularly immune to the nervous influence of this drug or its alkaloids. Crude opium is more effective in diabetes than either morphine or codeine. None of them probably cures the disease, but so modifies it as to make life bearable and happy, for the sugar is decreased in many cases and the sense of excessive hunger, thirst and nervous irritability is put aside. Itching of the skin in this class of patients is relieved by this treatment.

Opiates may be used to check mucous diarrhea after the intestinal canal has first been swept clean of mucus by a purge. Minute doses of  $\frac{1}{100}$

to  $\frac{1}{100}$  grain of morphine hypodermically will often cure an attack of serous diarrhea in children. The camphorated tincture is especially valuable in diarrhea, because it contains camphor and a volatile oil, both of which act as antiseptics.

In prolonged strain upon the system, as in great physical or nervous effort, or more frequently in old age to smooth out the cares of the remaining years of life and decrease worry, opium is useful, but not to be much used in young persons for fear of causing the habit.

In advanced phthisis it is of especial value to give just enough to relieve from pain and excessive cough, but care should be taken not to give enough to choke the patient and thus hasten death.

In heart disease, especially of the mitral valves, the patient often breathes very well when awake, but as soon as he falls asleep he starts up gasping for breath, and while it is especially true that morphine greatly relieves this very distressing symptom in mitral disease, it is of value in difficult breathing in all forms of heart disease, and should be always tried with discretion. It is contra-indicated in fatty degeneration of the heart.

Give it hypodermically in moderate doses if possible.

The use of opiates for sleeplessness I regard as one of the most important subjects for the general practitioner to keep in mind. There are plenty of remedies containing not a particle, or very little, of the danger that opium does of causing a habit, if the inability to sleep is due to any or every cause but pain. And although we have all tried some form of this drug to produce sleep when our patient is not in pain, we soon prescribe sulphonal, trional, or the bromides, or some remedy having similar action if we find that a hypnotic is to be needed long; and patients will do better, if not in pain, to take something other than morphine.

But let us place ourselves in the position of the patient and let us have many wakeful nights, due to a neuralgia or to some nerve injury, worn out with loss of sleep, too tired even to sleep if not in pain, and still suffering agonies from the pain, how long would one of us want to get along with a little dose of codeine, or bromide, or hyoscine? We wouldn't endure it at all; we would simply get the morphine or the deodorized tincture and give ourselves a good dose and quiet the distress, and get some sleep.

I said we would get it ourselves; so we would if we were able to do so; but supposing it is our patient and we do not like to give opiates very well, and we come in and see him and observe his pulse and temperature and find him doing well on the whole, and think his talk about intense pain is exaggeration, because he has had so much pain that he is getting hysterical, and we imagine that he is craving a hypodermic, and so give him something else that does not touch the pain at all, and then he has another night such as the old time clergy would depict as the lowest Hades, and he goes on night after night like this; but gradually

the injured or diseased nerve gets better, pain subsides, sleep is restored, and lo, the patient is cured, and we say how much better than if we had given him morphine; he would have wanted it right along, and we would have had an awful row with him to break it off.

Or, perhaps he has been very ill; the loss of sleep goes on night after night; he gets more and more exhausted, and dies. Because he was so ill? Possibly, but I'll venture to say many who are now dead might have been sustained by giving them sleep, by relieving the pain, and made to live by the use of a few doses of morphine.

I have had a trying personal experience in this very way. I was struck by an iron lever,  $\frac{3}{4}$  of an inch in diameter, of a locomotive engine going at the rate of eighteen miles an hour, just where the sciatic nerve makes its exit from the pelvis. The inflamed original injury extended to the whole nerve. This is the largest and longest nerve in our anatomy, and there is plenty of opportunity to build up an ache, and the pain for weeks was something dreadful. During the first forty-eight hours I received  $\frac{7}{8}$  of a grain of morphine in seven hypodermics, and one week later one more of  $\frac{1}{2}$  grain. That was all the morphine administered. How I used to plead, beg, scold, and even cry for just one dose to relieve the intensity of the pain. I was obliged to lie on my back all the time for one week. I could not lift my head from the pillow, and tried to persuade a member of my family to bring me just one grain of opium. No, I could not have it, as it was thought best not to give me opiates; milder remedies which required two or three hours partially to relieve the pain were thought best for me. Were I to go through the same experience again I would a hundred times rather die than endure such pain, even if sure of recovery in the end.

I beg your pardon for alluding to myself, but what I suffered has made such a profound impression upon my mind that if I were to live to the age of Methuselah I could not forget it, and I mention it because some of you will have surgical patients whose suffering will be just as intense as mine was, and I beg of you, in the name of humanity and for the credit to yourself, that you will occasionally give some opiate to stop the pain and give them sleep. When they beg for relief with tears in their eyes, do not treat them as if they were morphine habitués or lunatics, and wanted the drug for its intoxicating effect, but treat them as you would want to be treated under the same conditions.

Unless you find some ill-effects from the drug after the first or second administration, do not hesitate to give  $\frac{1}{8}$  to  $\frac{1}{4}$  grain once a day for one or two weeks, or even twice a day if necessary. But very often one injection every second or third day will suffice to give several hours of refreshing sleep, and the sharpness of the pain will have been dulled, so that another will not be needed for two or three days.

I remember in my own case how, after three



days of especially intense pain and after at last making myself understood, I was given  $\frac{1}{4}$  grain of morphine and inside of ten minutes I began to go to a beautiful place and soon was fast asleep. I shall never forget the world of good that one-eighth of a grain did me. The pain never returned again with such force as before, while under milder agents it had been growing more severe every day. In fact, after this one-eighth of a grain on the eighth day, I was able with the milder agents to control myself and, I believe, did not again ask for morphine.

If we have a patient of average intelligence, let us treat him as we would wish to be treated were he the doctor and we the patient.

### GONORRHEA IN WOMEN.

BY J. B. KILLEBREW, M.D.,  
OF MOBILE, ALA.

GONORRHEA in women is of great interest both to the medical profession and to society. Next to infection following labor, miscarriage or abortion, it is the cause of more suffering among women than any other agent. Probably, nearly half the cases of pelvic inflammation are of gonorrheal origin. This is to be greatly deplored for many reasons. In the majority of cases a woman contracts this loathsome disease innocently; and in many cases in which the damage done is not sufficient to produce invalidism, the function of the generative organs is so impaired as to cause sterility, thereby depriving the victim of the privileges of motherhood, the highest and noblest she possesses.

The sole causative germ is the gonococcus, but the infection is usually a mixed one. The disease may be contracted in many ways, usually by sexual intercourse with a male suffering from a gonorrheal urethritis. Any part of the genitourinary tract may be involved, but those parts covered by stratified squamous epithelium, being more resistant to the invasion of the gonococcus, are not as often the seat of infection as those covered by cylindrical epithelium. Hence, it is more usual to see a gonorrheal urethritis and endocervicitis than it is to see a vulvitis or vaginitis. The vulvovaginal glands and the glands of the vestibule are frequently the seat of primary infection. From some one or more of these foci of infection the disease is very likely to spread to the remainder of the genital tract, producing endometritis, salpingitis, ovaritis and peritonitis. Especially is this true in untreated cases. This extension of the disease is by continuity of tissue and not through the lymphatics.

The symptoms of gonorrhea in the female are not often severe and do not give rise to much suffering before the infection reaches the endometrium. It often happens that a woman who has married a man with gleet will notice, after five or six days, that there is a slight burning pain upon urinating; some redness, swelling and soreness about the vulva, with a profuse dis-

charge of pus, which compels her to bathe frequently. Being ignorant, she will attribute the trouble to excessive intercourse; and as the suffering is not great she will not, because of modesty, make mention of it, but bear the annoyance with good grace. The menstrual flow will appear before the signs of inflammation have disappeared. For three or four days it will be normal. Then follow sharp lancinating pains in the uterus with severe cramps. The flow will increase in amount and three or four days after the onset of the severe symptoms there will be a most profuse, irritating yellow discharge. The entire pelvis will become tender, frequently so much so that she cannot bear to be touched. The pus is probably mixed with blood. The temperature rises to  $100^{\circ}$ - $103^{\circ}$  F., and the pulse ranges from 90 to 110. Such is a typical picture of an acute attack of gonorrhea from the time of infection until it reaches the peri-uterine structures. Uterine infection may take place at any time, but usually occurs at the menstrual period when the endometrium is exfoliated. Fortunately, in many cases, even when no treatment has been applied, the gonococci do not advance beyond the internal os. In this event the symptoms gradually subside, and in many cases disappear entirely. Proyer has examined the scrapings from the cervix of 100 clinic patients who had absolutely no discharge of pus and found the gonococcus present in 22. This demonstrates the fact that a woman may show no evidence of gonorrhea and still be in a condition to infect others and to become actively inflamed herself, if the cervix be subjected to any traumatism. This also makes clear the necessity for sterilizing the cervical canal, superficially at least, before passing the sound, in order to prevent carrying the germs into the uterine cavity. I make it an invariable practice to apply tincture of iodine to the cervical canal before passing the sound.

That the onset of this disease in women is insidious and the symptoms mild is much to be regretted. Were they of sufficient severity to compel her to seek medical aid while the infection is confined to the urethra, vulva and vagina, in most cases she would be easily and thoroughly cured. The ease with which local treatment can be applied would render this result the rule, but, after the infection has reached the interior of the uterus, the condition is widely different, and in my opinion it is never cured except by surgical means, and then often only after the generative organs have suffered much damage.

The symptoms of gonorrheal infection of the genital tract are similar to those of infection by other pus-producing bacteria, and a positive diagnosis cannot be made except with the microscope. Even then it is not always positive, as one sometimes fails to find the gonococcus in the discharge from a gonorrheal infection. When the gonococcus is found, of course, the diagnosis is unmistakable. In gonorrheal infection the discharge is usually very profuse and irritating. The gonococcus has a predilection for certain

structures, especially for the urethra, and nearly every case of purulent urethritis is of gonorrheal origin. When facilities for the microscopical examination of the discharge are not obtainable, the history of the case is the best guide in making a diagnosis.

The prognosis in those cases in which the infection is limited to the urethra, vulva and vagina is good; in all others it is doubtful.

The treatment may be considered under two heads, *vis.*, preventive and curative. So long as the customs of society permit men to have promiscuous and illicit intercourse with women without putting the brand of disgrace upon them, it will be impossible to eradicate the disease from among us. Legislation can do no good, since laws governing this question, if made, cannot be enforced in the present state of society, and a law that cannot be enforced is worse than no law at all. It is not the prostitutes nor the women of loose character whom we wish to protect, but those young women who innocently contract the disease from husbands suffering from chronic gonorrhea. Few men would marry when in a condition to infect others if they realized their condition and the dangers to which they would subject the woman whom they wish to make their life companion. Men often regard gonorrhea in far too light a manner. It is not uncommon to hear a man say that he "does not mind gonorrhea," that he would as soon have it as a "bad cold." In some cases the disease in man is not productive of very distressing symptoms and subsides in a few days. No pus is seen coming from the urethra and he is apparently well, but in many of these cases there will remain a latent infection which will be aroused to activity when the proper stimulant is applied. Men should be taught the danger and insidiousness of this affection and the widespread evil resulting therefrom. The importance of subjecting themselves to treatment early in the disease and of continuing treatment until every sign of infection has disappeared cannot be too strongly insisted upon.

Many men have a stricture as a result of an attack of gonorrhea. This they look upon as a harmless condition when in reality it is a very serious matter. In many cases of stricture there is, just posterior to the narrowing, a small, inflamed or ulcerated spot in which the gonococci are present, but are quiescent and give rise to no acute symptoms. The ulcerated surface may be so small and the discharge from it so slight that the amount accumulated during the intervals between micturition is not great enough to cause pus to appear at the meatus. A man may be in this condition for years and never see a drop of discharge from the urethra, and still be capable of infecting others. I do not believe that any man with a stricture should marry before he has been thoroughly cured. Many others marry when suffering from a gleet discharge, thinking the discharge innocent because it produces no acute symptoms in them, but this discharge often contains gonococci. These germs, which are

quiescent and cause no trouble in a urethra which has become more or less immune to their action, are, nevertheless, capable of producing the most violent inflammation when introduced into a new field. In many instances the gonococci do disappear from the discharge and in such event it is harmless; but, as there is no positive way of determining when the gonococci are present and when they are not, it is always best to be on the safe side. No man suffering from any of the sequelae of gonorrheal urethritis should marry. Much more good can be accomplished by education than by legislation at the present time, and it is the duty of all physicians to educate the people in this matter.

As before stated, the curative treatment of gonorrhea in women is comparatively easy while the infection is confined to the urethra, vulva and vagina. Treatment consists of rest, thorough cleansing by douches containing some antiseptic solution, and local applications. If the vagina or vulva be affected it should be douched every three or four hours with 1:5,000 bichloride solution or  $\frac{1}{4}$ -per-cent. lysol solution. Local application of 1-per-cent. nitrate of silver or 2-per-cent. protargol should be made to the urethra once every twenty-four hours. The solutions applied to the vulva, vagina and cervix should be stronger. For this purpose I employ tincture of iodine, or 5-per-cent. nitrate of silver. These applications should be made once a day for three or four days and then every second day until all evidences of inflammation have disappeared. If the cervix is enlarged and congested it should be depleted by local blood-letting once a day for two or three days. Should an abscess form in the vulvo-vaginal glands it should be opened and treated in the usual way.

The only question in the treatment of acute gonorrheal endometritis that admits of discussion is the advisability of curetting. I believe these cases should be curetted as soon as possible. Some operators are opposed to this procedure, claiming that complications are apt to occur. Complications do not follow a well-performed curettage nearly as often as they do intra-uterine irrigations or any other method of non-operative treatment. Curettage is done for endometritis produced by any other pyogenic bacteria and I can see no reason for discriminating in favor of the gonococcus. It is always well to remember that complications do sometimes follow curettage and to tell the patient or her friends of this possibility, so that you will not be censured should such occur. If the patient will not consent to operation, intra-uterine irrigation is the best method of treatment. If this is begun before the gonococci have penetrated the endometrium a cure may result, but does not always follow. I usually irrigate first with a 1:10,000 bichloride solution, to be followed immediately by a saturated solution of boric acid. This treatment should be repeated every twenty-four hours. In some cases the cervical canal is so small that irrigations cannot be given. Vaginal douches of  $\frac{1}{4}$ -



per-cent. lysol solution at a temperature of 110° to 120° F. should be given for fifteen or twenty minutes every two hours.

In nearly all cases of chronic gonorrheal endometritis the infection has extended to the peritoneal structures and any treatment applied to the endometrium alone will not effect a cure. In these cases treatment should also be applied directly to the appendages. A well-performed curettage will, by removing the focus of infection, give some temporary relief in most cases, but there is usually a relapse. The treatment applied to the appendages in all cases, not of long standing, should be at first conservative. It can be applied through an incision in Douglas' cul-de-sac and will in many instances bring about a cure. Radical work should be done in cases in which conservative treatment has failed, in which there is extensive suppuration, and in cases of genital sclerosis.

The conservative treatment to be employed will vary with the condition found to exist upon inspecting the appendages through the cul-de-sac opening. It consists essentially of breaking up all adhesions, opening the fimbriated end of the tubes, wiping them out with iodoform gauze and securing drainage. In those cases in which the fimbriated end of the tubes cannot be opened it is best to do a salpingostomy.

Not all cases treated in this way will be cured, but some will, and as a secondary radical operation can be done in those cases in which failure follows the conservative treatment, without any increase of danger, I believe it our duty to try the conservative treatment first and to make every effort to save for the woman her generative organs.

In cases of pyosalpinx, unilateral or bilateral, in cases of genital sclerosis, and in those cases in which conservative treatment has failed, a complete vaginal hysterectomy should be done, using forceps instead of ligatures to control hemorrhage.

#### A CASE OF SPONTANEOUS RUPTURE OF THE EYEBALL.<sup>1</sup>

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M. F., female, French, aged eighty-seven years, entered the French Hospital April 3, 1900. The patient was treated for paralysis agitans. Her mental, as well as physical, condition was very poor. As the ophthalmologist to the Hospital I was called to see her in November, 1900, to treat her for a slight catarrhal conjunctivitis of both eyes. At that time I noticed senile cataract in each eye, as well as large opacities of the cornea, but there was no sign of staphyloma. The vision in each eye was very poor, being only

$\frac{4}{300}$ . In the course of three weeks she was cured of the trouble with the conjunctiva. On February 27, 1901, at three o'clock in the afternoon, she complained of a very sharp pain on the left side of the head. At this time the patient was in bed, although a short time before she had been to the closet with an attendant. By the time the assistant house surgeon, Dr. Thomassen, reached her, there had been a large hemorrhage from the globe of the left eye, much larger than one usually gets in an operation for enucleation. The crystalline lens was lying on her left cheek, much vitreous had escaped, and a portion of the iris was prolapsed.

The attending surgeon to the hospital, Dr. George G. Van Schaick, was making his daily visit to the institution. He was called and came with the house surgeon, Dr. A. W. Haskell. Dr. Van Schaick decided to cut off all the vitreous and iris that was presenting at the wound. This was done and a bandage applied.

As I was out of town at the time, I did not see the patient until the following day. On examination I found that the opening in the cornea was in the center and seemed only large enough to allow the lens to pass through. It was horizontal and the edges were rough. There was much blood in the anterior chamber. The size of the eye was not diminished. The wound closed slowly, it being six weeks before the cornea was completely healed.

On April 28, 1901, the patient was transferred to Bellevue Hospital. I was anxious to get the eye, if the patient died, and have a microscopic examination made. On July 1st I took up my service at the City Hospital, Blackwell's Island, and thought I might see the patient there, as most chronic cases are sent there from Bellevue. She never reached the City Hospital and must have died during the hot spell in the last of June, although I could get no history of the case at Bellevue.

This case is strange in the fact that there was no traumatism nor was there any ulcerative process going on in the cornea. There was no staphyloma. Had there been any of these conditions, there would be nothing unusual about the case. The patient had well-marked arteriosclerosis, as might well be expected in a person of her age. It is possible, perhaps, that straining at stool may have ruptured one of the vessels of the eye and produced the hemorrhage, which, as I have already stated, was unusually large.

I have been unable to find any literature on the subject, or to find any colleague who has heard of a similar case.

Brooklyn Hospital Gets \$3,000.—The will of Dr. William Augustus Pierrepont of Brooklyn was filed recently. Dr. Pierrepont was unmarried and died on January 6th, a few days after the death of his mother. The Brooklyn Hospital receives \$3,000 for the endowment of a bed to be known as the "Dr. Pierrepont Bed."

<sup>1</sup> Read before the Section on Ophthalmology of the New York Academy of Medicine, December 18, 1901.

## MEDICAL PROGRESS.

## OBSTETRICS AND GYNECOLOGY.

**Puerperal Phlebitis in an Unusual Locality; Relapse.**—Puerperal phlebitis occurring outside of the uterine veins or the vessels of the lower extremities is comparatively rare. Hence special interest attaches to a case involving the epigastric and internal mammary veins, observed by M. PINATELLE (Gaz. hebdomadaire de Méd. et de Chir., Dec. 19, 1901). The veins of the lower extremities were first attacked about a week after labor, and the phlebitis gradually ascended, attacking the vessels of the abdominal wall. The patient was febrile for two months and unable to walk for six months. Eleven years later, no miscarriage, pregnancy or new infection having occurred in the interval, a relapse recurred; the pain and swelling on this occasion were limited to the left abdominal wall, where the thickened, sensitive, cord-like veins could be distinctly palpated. Two years later a third attack of phlebitis occurred, this time affecting the right side and embracing the region between the xiphoid appendix and the root of the thigh. There was no sensitiveness, edema or loss of power in the lower extremity.

**Lacerations of the Perineum.**—A number of essays have been written for the New York Medical Journal (Dec. 28, 1901) upon the causes and methods of preventing this annoying complication, which, if not repaired at once, frequently causes a great deal of misery later. G. B. TWITCHELL says that the vulvar opening is not stretched as by an entering wedge, but by having the lower end pushed away from the upper. That is, if, in the swinging of the head, as it extends, it slides on the perineum, the space between the pubes and fourchette will increase; on the other hand, if the head does not slide during this swing, the opening will not increase and the perineum will follow the head. The best lubricant to facilitate this sliding is the natural one and hence douches, frequent examinations, etc., are to be avoided. M. A. WALKER urges the importance of emptying the rectum and bladder to give more room, as a preliminary step. During the latter part of the second stage all voluntary effort should be stopped so far as possible by encouragement not to "bear down" and later by chloroform. Too rapid advance may be avoided by pressure with the fingers pointing posteriorly and pressing against the (maternal) posterior segment of the head during each pain. Thus by retarding the advance of the frontal segment there is a tendency to increase flexion and allow the suboccipital region of the head to pass as far as possible underneath the pubes. The shortest diameter of the head thus comes in contact with the vulvar outlet and the head should be slowly extended over the perineum between pains, taking care that the nose and chin are not born with a jerk. J. L. ARMSTRONG sums up the subject by advising (1) patient and persistent endeavor to bring the longest diameter of the presenting part in relation with the longest diameter of the outlet, and (2) the constant effort to secure perfect dilatation of the soft parts. All writers advise against placing the fingers in the rectum to assist extension on account of the danger of infection, and most of them express themselves as opposed to episiotomy.

**Submucous Myomectomy.**—The removal of fibroids of the uterus located just beneath the mucous membrane is usually done through the vagina, with or without cutting the neck of the uterus, provided the tumor is not too large. A. RABAGLIATI (Med. Press and Circ., Dec. 11, 1901) encountered a large fibroid which he could not remove except through the abdo-

men. After exposing the uterus and drawing it up into the wound as far as possible, he opened its anterior wall by a free incision until the mass was reached and shelled out. This left only the mucous membrane separating the wound in the vagina from its cavity. As a preliminary step before making the incision he gently clamped both ligaments to be sure no severe hemorrhage should occur as soon as the deep work was begun. After the clamps were removed no such hemorrhage occurred, but as a precautionary measure their use was wise. The wound of the uterus was then sutured in tiers and the abdominal wound closed without drain in the usual way; a complete uneventful recovery followed. The myoma measured five and one-half by four and one-half inches and consisted chiefly of a mixture of myomatous tissue embedded in fibrous tissue.

**Dysmenorrhea.**—This most troublesome condition is discussed from the standpoint cause in an exhaustive paper by Dr. MENGE (Centralblatt f. Gynäk., 1901, No. 50). The pain of this condition is very like that of childbirth, as is admitted by all women who have borne children and suffered from dysmenorrhea. The after-pains of childbirth, moreover, bear out the supposition that obstruction in the canal of the uterus is the most fertile cause of the pain. In this case it is the large clots of blood which are the source of the obstruction, although the canal is almost wide open. The degree of the pain depends upon the character of the obstruction and the condition of the central nervous system. If the obstruction is large, then the pain alike in childbirth and in dysmenorrhea is much greater, even with a healthy nervous system. The converse also obtains and we find many women who suffer little pain during childbirth and none during the menstrual flow. On the other hand, there are very many women who have functional neuroses and therefore, although there is little or no obstruction, suffer intense pain under both conditions. Pains of dysmenorrhea are also comparable to those experienced when a foreign body is left in or has grown in the organ. Such are polypi, mucous, fibrous or placental; remains of the decidua; sounds, gauze or pessaries. Here again the disproportion between the canal and the foreign body determines the amount of pain. Dysmenorrhea is also due to an early improper clotting of the menstrual blood, which should be fluid, at least until after it has left the uterus. The highest degree of dysmenorrhea is reached with a healthy nervous system when all the blood of the menses is retained, as is seen in congenital closure of the uterus with the development of a hematoma at the time of puberty. As soon as the blood is evacuated all the pain disappears. It is also seen in occlusion of the internal os, sometimes secondary to operations or to the use of caustics. Removal of the cause cures without treatment of the nervous system. With normal genital organs dysmenorrhea may occur from the presence of mucus in the canal of the cervix. Usually when this is expelled the pain decreases or ceases. Occasionally, however, it continues owing to the disturbance of the nervous system by the pain first experienced. The small narrow canal of the cervix, without disease, in young women and nulliparae may cause both dysmenorrhea and sterility. Here by mere dilatation, with or without incision, the symptoms usually disappear. Permanent relief is present only after childbirth. Often these patients require, however, long treatment of the nervous system. Inflammatory dysmenorrhea is the last type. This should be treated by removing the cause and always by treating the nervous system, because this is damaged by both conditions. Without doubt the purely nervous



type of dysmenorrhoea, namely, that in which the nervous system has been damaged, is the most common of all and accounts for the widespread amount of hysteria and neurasthenia in women. The importance of this condition is usually overlooked by physicians. It, however, demands most careful and patient treatment in the usual ways.

**Early Sign of Pregnancy.**—The earlier a diagnosis of pregnancy and of the death of the fetus can be made the better. O. SCHAEFER (Centralbl. f. Gynäk., 1901, No. 50) says that careful observations will show in the newly-pregnant woman a temporary pointedness of the features, swelling of the breasts and an unexplainable and obstinate tendency to faint, decrease in the urine, somnolence, forgetfulness and temporary decrease in mental acumen, if the patient is anemic. These are the well-known early systemic signs. The new local signs to which he directs attention consist in a characteristic discoloration in stripes, reddish on a livid background, which appear in the neighborhood of the urethra or on the vestibule of the vagina. The stripes run for the most part crosswise or obliquely. So soon as the child within the womb is dead these stripes disappear, especially if the uterus is emptied, even though a packing of gauze be placed within it. The condition is due, therefore, not to the simple hindrance of the blood-flow, but to a vasomotor reaction depending entirely upon the life of the child; as soon as the pains begin with the purpose of emptying the uterus of the dead fetus the stripes disappear. An examination of the blood will also show what the writer terms a resistance of the cells of the blood from the uterus to admixture with various physiologic, pathologic and artificial substances. The most simple and direct method of making this examination is to employ the iodine-potassium-iodide solution of Gram. This mixture makes the so-called resistant blood-cells brown, the less resistant a light yellow and the very feebly resistant almost colorless. As a rule if the woman is healthy, the blood-cells which take a deep stain outnumber the weakest between two and one-half and five to one. The method is not absolutely reliable but is an indication strongly suggestive of pregnancy. Whenever the blood examination is resorted to it will be wise to make a control test of the blood taken from the finger, simply because the blood from the uterus alone may be misleading. Another feature of the blood in early pregnancy is that when the cervix is pricked to draw it down it is rather difficult to stop the hemorrhage.

**Twin Births.**—Occasionally in pregnancy with twins one child is born and then after a long pause, many hours in duration, the second appears. S. CHOZAN (Centralbl. f. Gynäk., 1901, No. 49) says that when face to face with this condition the practitioner must decide between the policy of patient waiting and active interference. It is not always easy to decide the question. The points upon which a decision may be reached are the general condition of the mother, the reaction of the womb after the first child is born, the presence or absence of active or passive bleeding, and, finally, the state of the unborn child after repeated examinations at short intervals. In general it is best to withhold interference until some definite indications arise.

**Spontaneous Facial Paralysis of the Newborn.**—The majority of authorities hold that this condition is usually of traumatic origin due to the employment of forceps during parturition. O. MACÉ (L'Obstétrique, Dec., 1901) claims that there are two varieties of facial paralysis in the newborn—one due to trauma and another which is congenital. The first class results from

forceps which produce pressure either directly or indirectly from edema, blood tumors or compression at some portion of the pelvic canal by a tumor. Again, the force of the uterine contractions upon a head passing through a contracted pelvis may be sufficient to cause crushing of the bony canals through which the facial nerves pass out of the interior of the cranium, thereby producing permanent injury to the nerve. Or this same factor may produce cerebral hemorrhage at the point of exit for the nerve. Under the second group he places those caused by anomalies in development of the nerves or their ganglia. Adherence of the annulus is another etiologic factor in causation. Writers have described cases in which there was atrophy of the nerve or complete absence of it on one or on both sides. Congenital facial paralyses are in general unilateral. They are partial or complete and are peripheral or central. Cases of nuclear origin are most interesting. Cabannes has described both unilateral and bilateral forms. In general the prognosis in congenital facial paralysis is good. By the use of the continued electric current in some cases and the interrupted in others, one can hope for recovery if the causation be not an arrested development. The time required is between two or three days or a month.

**Surgical Treatment of Dysmenorrhoea.**—In the treatment of dysmenorrhoea the dual relationship between the general health and the generative organs must be constantly kept in mind, says H. D. FAY (Amer. Gyn. and Obst. Jour., Dec., 1901). Impaired general health and normal pelvic organs, stenosis of the cervix, endometritis, displacements of the uterus, diseases of the appendages with impaired general health, or a combination of the foregoing conditions are the usual characteristics found in painful menstruation. In the latter two conditions surgical interference may or may not be indicated. If the pain is acute or is limited to the first day or two, with relief in the intermenstrual period, surgical treatment is not demanded; but if the pain extends over a number of days surgical treatment is indicated. Goodell advocated the method of rapid dilatation and this was supplemented by curettage. Then the application of caustics to the denuded surface with drainage was added and still the results were not satisfactory. Later Dr. Gill Wylie employed a drainage plug held in position by a Smith pessary for six days. The author follows this mode of procedure, but keeps the plug in for from three to six weeks and confines the patient to her bed for two or three weeks. If no discomfort is experienced, the patient is permitted to go about with her plug *in situ* for several weeks longer. The hard rubber drainage tube causes the formation of a cicatricial ring of tissue at the point of constriction which ensures patency. In a few cases the plug causes pain and must be removed sooner than the specified time. When there are fibroids or displacements or even painful ovaries the author follows out this method of treatment and later performs a second operation to relieve the other existing conditions.

**The Angiotribe.**—The practical application of the angiotribe will suggest itself to every thoughtful surgeon, says J. N. ELLIS (Amer. Gyn. & Obst. Jour., Dec., 1901). It is useful whenever it would otherwise be necessary to ligate *en masse* a vascular pedicle, reducing its bulk to the least possible dimensions consistent with safety, and, by the action of the angiotribe alone, or with the aid of a supplementary ligature of fine catgut, assuring perfect primary and permanent hemostasis. The possibility of a secondary hemorrhage with the use of the angiotribe alone is considered by some surgeons, but the author has never seen the accident in his personal experience. Microscopical ex-

amination of the compressed tissue by Thumin shows that the integrity of the compressed tissue is not destroyed, but that it is simply compressed; proving that necrosis and sloughing do not take place, but that a gradual process of revitalization is the result. It is impossible to formulate a fixed rule as to when it is necessary to supplement the action of the angiotribe with the precautionary ligature. This must be determined by judgment, observation and experience. The amount of force and the time of its application depend upon the density of the tissues involved, the size of the pedicle and the object it is desired to attain. The angiotribe is inapplicable to control hemorrhage or secretions or wounds of such friable organs as the liver, spleen and kidney, but its utility in retro- and transperitoneal nephrectomy and in splenectomy is evident. In vaginal hysterectomy angiotripsy is particularly advantageous. In supravaginal hysterectomy it can be used to crush the broad ligaments and also the cervix at the point of amputation. In removal of approximately normal adnexa or excision of small ovarian or intraligamentous cysts it produces absolute hemostasis. It is unnecessary and unjustifiable in appendectomy if either the McBurney or Dawbarn operation can be employed. The use of the angiotribe is by no means limited to operations within the abdominal and pelvic cavities. In thyroidectomy it is of excellent service. It can be employed in the removal of pedunculated keloids and for compression of the spermatic cord in castration. The author uses it to amputate in elephantiasis of the labia, clitoris or scrotum. As a substitute for the pile clamp, in the operation for hemorrhoids, Dr. Robert T. Morris tells the writer that it not only destroys the vessels, but also the nerves, so that the patient is unaware that an operation has been performed. It is also useful in removing portions of the rectum in prolapse or in any of the methods of proctectomy and proctosigmoidectomy. It is a simple and an excellent means of performing circumcision in infants and in controlling the hemorrhage at the frenum in circumcision of adults.

#### **Surgical Intervention in Dystocia from Fibroids.**

—The following conclusions are reached by ANDRÉ BOUSSET (Annales de Gyn. et d'Obst., Dec., 1901) in regard to the various operations and indications for operations in this condition: (1) Fibromata cause in many instances vicious fetal positions and form a mechanical obstacle to the downward passage of the fetus. (2) This is more often the case when the fibroma is either at the lower portion of the uterus or at the cervix. (3) If the fibroma is diagnosed it may be removed after or even during labor. (4) Dystocia from causes in fetus or uterus justifies surgical intervention. (5) Fibroma of the vaginal region should be removed by the vaginal route. (6) Those of the abdominal type should be operated upon suprapubically. (7) Symphysiotomy is to be absolutely rejected in this condition. (8) Conservative Caesarian operation is justifiable in certain exceptional cases. It is a better operation than the complete effacement by myomectomy. (9) The Porro operation must be reserved for certain particular limited cases. (10) Complete hysterectomy is radical and truly curative and is the method of choice to be employed whenever possible, be the child living or dead.

**Use of the Uterus in Cystocele Operations.**—On account of the unsatisfactory results which follow the various modifications of colporrhaphy, J. BRETTAVER (N. Y. Med. Jour., Jan. 11, 1902) recommends the use of the uterus in increasing the strength of the anterior vaginal wall, an operation which has heretofore been performed a few times. An incision is made through

the anterior vaginal wall extending backward from the urethral opening; the parts are separated; the uterus is markedly anteverted and brought down into the wound, thus lying between the anterior vaginal wall and the bladder. It is then stitched in place and a part of the vaginal wall usually resected before it is sewn up. Of course, this operation is suitable only in women beyond the child-bearing period. The results in three cases seem very satisfactory.

**Ventrosuspension of the Uterus.**—On account of disastrous results which sometimes follow fixation of the uterus to the anterior abdominal wall, especially during pregnancy and labor, numerous methods have been devised to allow a certain degree of mobility and yet suspend the uterus in its normal position. The Alexander operation is difficult, requires considerable training and makes no provision for the bound-down uterus, which is the one usually requiring interference. D. T. GILLIAM (N. Y. Med. Jour., Jan. 4, 1902) has devised an operation which he believes proves efficient. An incision, three inches long, is made in the median line; the adhesions are broken up, and, with the finger behind the broad ligament, the round ligament is caught up at a point an inch and a half from the uterus and a thread passed around it. The other ligament is similarly treated. The skin and subcutaneous tissue are retracted from the fascia and muscular layers of the abdominal wall and a perforation is made through the fascia and muscular layers, beginning half an inch from the wound and passing downward and outward into the peritoneal cavity. Forceps are passed through this opening and by means of the thread the round ligament is drawn out through the perforation and stitched to the fascial layers. The uterus is thus not fixed, but rests easily and naturally against the bladder, and varies in position with the condition of that organ and the rectum. The normal course of a pregnancy is in no way interfered with.

**Spurious Abortion.**—During the last few years there have been reported three cases which purported to be instances in which, after a few weeks of amenorrhea accompanied by enlargement of the uterus, the formation of the decidual membrane and symptoms of pregnancy, this decidua was thrown off and no ovum was found. In two of these cases an ectopic gestation was suspected and an operation done, but no evidences of any ovum was discovered. It has, therefore, been supposed that these symptoms and signs of pregnancy were not due to the presence of an ovum, but that there was some other stimulating factor. W. E. FORTMANN (Med. Chron., Dec., 1901) had the good fortune to see such a case and after a thorough microscopical search a small, shriveled ovum, not more than five or six days old, was found. This had undoubtedly been the exciting cause in the production of the signs of pregnancy, but could be very easily overlooked. It is thought that all the reported cases have been similar ones and that the ovum could be found, perhaps, only after a most diligent search. In order to exclude extra-uterine pregnancy it is, however, necessary to be sure that such an ovum is present in the decidual membrane.

#### **SURGERY.**

**Cases of Rupture of the Spinal Ligaments.**—In the long bones oftentimes fractures and luxations will occur before the ligaments rupture. That this is not so generally true in the case of the bones of the vertebral column and their ligaments is the belief of C. A. PAINTER and R. B. OSGOOD (Boston Med. and Surg. Jour., Jan. 2, 1901). These writers present an analysis of all the cases in the literature classified as injuries to the spine accompanied by ruptured ligaments. In addi-



tion they report four cases of injury to the spine in which there was kyphosis without tuberculous or other disease of the vertebrae, in which there were symptoms of pressure on the cord, which symptoms were relieved, entire functional restoration following a few months after treatment with plaster or leather jackets was begun. The force which commonly produces rupture of the spinal ligaments is applied either from above downward upon a flexed vertebral column, or from below upward. In one case muscular exertion alone was responsible for the rupture. This case was examined postmortem, and it was shown that there was no fracture nor dislocation present. The authors believe that nerve-pressure symptoms may occur from a simple flexion of the vertebral column; in their own four cases flexion of the column would bring on pressure symptoms which could be immediately relieved by hyperextension; there was no apparent lateral deviation of the spinous processes and nothing to suggest forward displacement of the vertebrae at the seat of the kyphosis. Recovery is promoted by prolonged rest in a position which favors the repair of the ruptured ligaments.

**Craniotomy.**—A simple, rather rapidly operating instrument for opening the skull has been devised by J. SCHOENMAKER (*Centralbl. f. Chir.*, 1901, No. 50.) The usual four holes are bored after the method of Doyen. Into two opposite holes the instrument is inserted and within a minute or a minute and a half a cut up to about 10 cm. long can be made. The instrument consists in a cutter held in a traveler and kept from twisting by a brace on either side. The traveler has a vertical handle for steadying it, runs along a shaft, and is advanced by a screw propelled by a ratchet and pawl in the right hand while the left grasps the handle. Counterpressure against the advance of the cutter is gained at the other hole where the end of the shaft suitably bent is received. Without chipping or splitting, the cut steadily proceeds with rapidity enough for all practical purposes.

**Covering Defects in the Skull.**—Absence of the bone-covering of the brain following accident or operation is a serious matter for the patient. For the covering of large defects of the skull through injury or operation after the method of Müller-König, the following rules are emphasized by A. DEXLER (*Arch. f. klin. Chir.*, 1901, B. 65, H. 1.) They must be covered by secondary implantation because the wound must be brought to a condition of absolute asepsis, so that the pus-processes so fatal to life and so damaging to a healing of the bone-flap may be avoided; (2) because the splinters of bone broken out by the injury cannot be replaced evenly and satisfactorily as a rule, at the primary operation; (3) because if the granulations in the neighborhood of the wound have grown upward to a suitable distance, they will much better support and nourish the new bone-flap and fill up the whole cavity; (4) because by a secondary implantation a good opportunity is given the patient to recover from the first operation and gain strength enough to accept the new bone tissue. A further technic is that all scar tissue be removed as fast as possible without damage to the brain over the area of implantation. The margins of the bone defect should be freshened and the flap consisting of periosteum and bone should be somewhat larger than the defect itself. In determining the place of this flap it is necessary to reckon with a later displacement by the contraction of the scars. The larger the flap the greater is the importance of a large artery in its base to secure full nourishment. It is not necessary to have in the base of the flap a thin layer of bone cortex with the periosteum attached. It is worth while to see that between the transplantation of this com-

bined flap and a hairy skin-flap a sufficient time shall intervene so that the former shall be fully in place before it is disturbed at all to accommodate the latter.

**Ureteral Anastomosis.**—The necessity for this operation arises at unexpected moments during laparotomies by the vaginal and abdominal routes. Every surgeon must be well informed, therefore, as to the various ways of uniting the severed ureter. W. K. TUNNICLIFFE (*Annals of Surgery*, Dec., 1901) reports a case in which the usual method of making the union was reversed in the following manner: While removing the uterus for complete prolapse of that organ and of the vagina with the bladder, the ureter was divided about two inches from the bladder through having been mistaken for a vein. On investigation the distal portion was found to open in the bladder and urine dripped slowly from the other end. Van Hook's method of union was at once determined upon, but in bringing down the proximal end it was split upward for one inch. Thus, the interval between the two ends and the corresponding difficulty of uniting them were increased. The advisability of opening the abdomen for carrying on the operation was now considered and rejected. Since the upper segment was already split and the vagina already widely open, he decided to reverse the method of Robinson by implanting the lower into the upper end. A curved needle with a ligature was passed through the wall of the lower segment, thence into the canal of the upper portion for an inch above the split and through the wall of the ureter and the surrounding structures on to the peritoneal surface. The needle was then taken off and the suture caught with a pair of forceps; the needle was then threaded on the other end of the suture and the steps were repeated as before. By manipulation and traction the lower end of the severed organ was drawn into the upper, and there tied. Fine sutures now completed the anastomosis and the joint was re-enforced by a covering of peritoneum; the vagina was packed with gauze and the patient put to bed in a very good condition with orders for strict attention to the dressing for leakage. Eight hours after the operation eight ounces of urine were withdrawn by catheter, which suggested that the repaired ureter was doing its duty. One year has elapsed since the operation and the patient is perfectly well.

**Thyrotomy for Infraglottic Laryngitis.**—A case exhibiting difficult respiration and altered voice from a subglottic growth is reported by G. MASINI (*Gazz. degli Osped.*, Dec. 8, 1901). Laryngoscopic findings were the following: Rima glottidis narrowed to three millimeters and irregular in outline from turgescence of the vocal cords, the latter being red and immobile; arytenoids showed limited motion on inspiration and attempts at phonation; below the cords was seen a pale red papillomatous growth, filling the interligamentous space as far as the posterior third of the aperture between the cords. Other measures for the relief of the patient's respiratory distress having failed, thyrotomy was performed under chloroform, the usual technic of laryngeal surgery being followed. After the cavity of the larynx was opened, a considerable portion of the tumefaction was removed by curettage; induration of the tissues in the intercartilaginous region and the fear of injury to the crico-arytenoid articulation prevented entire removal of the growth. The wound was closed by suturing the thyroid cartilage, a cannula being left in position; the latter was permanently withdrawn on the thirtieth day as the respiratory function was fully reestablished. The patient has been under observation for nine months, there has been no recurrence of respiratory trouble and the voice has been almost entirely restored, although the laryngeal picture still shows

some deviations from the normal. Unfortunately a microscopical examination of the tissue removed was not made.

**Cervical Ribs.**—In 1895 Küster collected 139 cases of ribs developing from the transverse processes of the seventh cervical vertebra. Among these cases 28 were diagnosed *intra vitam*, and of the latter number about half gave pronounced clinical symptoms. M. BOMCHARDT (Berl. klin. Woch., Dec. 23, 1901) describes four cases of this character recently operated upon at Von Bergmann's clinic. The circulatory disturbances produced by supernumerary ribs are due mainly to the neighborhood of the subclavian vessels. Operation is indicated when a progressive aneurism results, inasmuch as the continued growth of the latter is dangerous to life. In numerous instances syringomyelia is an associated condition. In cases in which the chief symptoms are due to pressure in the brachial plexus and in which electrical treatment fails to give relief, operation may be undertaken with excellent prospects of cure. If, however, in addition to brachial-plexus symptoms, paralysis of the recurrent nerve and widespread disturbance of sensation be present, general disease of the nervous system is to be predicated.

**Diagnosis Between Acute Appendicitis and Atypical Typhoid Fever.**—Fortunately, operations in the initial stages of typhoid fever are as a rule well borne, and it is the initial stages of atypical cases of typhoid that most frequently suggest appendicitis. When a late perforation in an unrecognized typhoid, manifested by pain, tenderness, rigidity and other symptoms of general peritonitis, is operated upon for supposed appendicular peritonitis, the prognosis is very grave. In acute abdominal lesions, considered from the surgical point of view, four symptoms are of especial weight. These symptoms, writes M. H. RICHARDSON (Boston Med. & Surg. Jour., Jan. 9, 1902) are pain, tenderness, muscular rigidity and fever. The absence of any one of these symptoms throws doubt upon the diagnosis of peritonitis. No lesion of the appendix sufficiently extensive to affect the peritoneum can possibly exist without either pain, tenderness, rigidity or fever. If pain, tenderness and fever are present without rigidity of the overlying muscles, a peritonitis localized about the appendix is at once excluded, though an intra-appendicular lesion may be present. Pain and rigidity without tenderness would throw serious doubt on the diagnosis of appendicitis. The absence of fever alone, the other three symptoms being present, would form the least doubtful combination, for absence of fever is sometimes conspicuous in really serious local peritoneal infection. The absence of rigidity must put the surgeon on his guard; he must account for the absence of this symptom before he opens the abdomen. In such a case exhaustive inquiry into the history of onset, previous malaise, prevalence of typhoid in the community and history of the pain itself, must be made. Careful examination of the blood is imperative. Without pain at some time in the course of the disease there can be no acute surgical lesion of the abdomen. The absence of rigidity or tenderness in the presence of fever and pain usually signifies typhoid, or simple continued fever. If constitutional signs in a doubtful case are severe, but local ones hard to establish, Richardson would postpone operation; but when the abdominal symptoms—pain, tenderness, rigidity, with or without distention—call loudly for operation, he would open the abdomen in spite of the possibility of typhoid.

**X-ray in Bone Diseases.**—The important aid which the Roentgen rays afford in the differential diagnosis of osteomyelitis, osseous cysts, osteosarcoma and other osseous lesions is duly emphasized by CARL BECK (Jour.

Amer. Med. Assoc., Jan. 4, 1902). Osteomyelitic foci can be distinguished by their light shade in the midst of the dark shadow of the cortex. The regularity of the cortical line and the external proliferations distinguish it from osteosarcoma and the absence of distention from osseous cyst. Necrosis and other later stages of inflammatory processes can be distinctly represented and sequestra also made out. It is somewhat more difficult to diagnose inflammatory processes in the joints. In acute rheumatism and inflammatory processes due to infection the integrity of the articular outlines is well marked, and in the latter case the distention of the joint by serum or pus can be detected. In chronic rheumatic processes the articular bone line appears irregular. In arthritis the contours of the bone epiphyses are irregular and the deposits are recognizable as light shadows of the deformed epiphyses. In tuberculosis of the bones and joints differentiation by the X-ray is readily possible from other lesions which clinically resemble it. The walls of an intra-osseous focus appear thickened, portions are translucent and their contours irregular. The articular outlines of a joint are irregular and appear diffuse, cloudy, and sometimes shaggy. Cheesy foci appear translucent in later stages, the cortex is sometimes destroyed and leaves the impression of having been scooped out with a gouge. In tuberculous coxitis, the upward dislocation of the femur and the separation of its head in the acetabulum can be readily recognized. The only marked sign of tuberculous spondylitis consists sometimes in the presence of an abscess below Poupert's ligament, the nature of which can be interpreted only by the existence of vertebral changes. The skiagraph of a periosteal sarcoma is, characteristic, since it shows fine, spiculated trabeculae that radiate from the surface. In the soft myelogenous variety an absence of osseous tissue is seen, only small fragments being left here and there. The hard myelogenous variety shows more osseous tissue than the former, but its outlines are very irregular. In chronic osteoperiostitis, the walls appear irregular, but the irregularity is one-sided and exteriorly; in tuberculosis the shade would be cloudy or baggy; in osteomyelitis the cortex shows nearly normal outlines. The skiagraphic expression of syphilis is marked in the congenital form by the presence of large ossified areas in the epiphyses that would appear translucent in their normal cartilaginous condition. On the other hand light areas are noted in the diaphyses as an expression of insufficient calcareous deposition. Gummata show regular, light shaded foci, which disappear upon administration of potassium iodide. Osseous cysts may easily, if the same clinical signs are present, be confounded with sarcoma. In cyst, however, the cortex usually appears narrow, well marked, and regular. The fluid center appears translucent and the adjacent epiphyses are normal.

**Traumatic Intracranial Lesions.**—The difficulty of determining the exact intracranial condition after an injury makes the indications for operations rather indefinite and dependent largely upon the surgeon's diagnostic ability. C. PHILPS (N. Y. Med. Jour., Jan. 11, 1902) believes that even a rational suspicion of the existence of a simple fracture, as in case of a hematoma with a history of considerable violence inflicted upon the head, with or without concurrent symptoms of intracranial lesion, demands explorative incision. Unsuspected osseous depressions and most serious, yet remedial, complications have thus been discovered and relieved. It entails no conceivable danger. If the fissure is found closed, further investigation is not warranted unless symptoms indicate it. An open or comminuted fissure always demands investigation. In dealing with hemorrhages and brain injuries the problem becomes



more difficult. The supradural form of hemorrhage (between the dura and bone) is the one which offers the best prospects for success and fortunately can usually be diagnosed. With or without primary unconsciousness, an interval of consciousness most frequently precedes its later loss. This fact is the most essential point in diagnosis and in conjunction with a subnormal or slightly elevated temperature can hardly be misinterpreted. A man suddenly dazed by a blow or a fall, who goes home thinking the injury is trivial and later develops a progressive stupor and coma, surely has an intracranial hemorrhage and almost as certainly it is of a supradural form. Subdural hemorrhages and brain injuries are less easily diagnosed, and the results of treatment are so uncertain that interference is seldom indicated.

#### **PATHOLOGY AND BACTERIOLOGY.**

**Reagent for Iodine.**—To determine the presence of iodine in the various secretions, G. DENIGES and J. SABRAZES (Münch. med. Woch., Dec. 17, 1901) recommend the following: One gram of starch is mixed with 10 c.c. of cold distilled water; then 40 c.c. of boiling water is added and the whole boiled for from one to two minutes; on cooling, 0.5 gram of nitrite of sodium is incorporated with the mass, which is then brushed on suitable paper. When this is dipped into the liquid to be examined and then touched with a glass rod moistened with 10-per-cent. sulphuric acid it forms a very delicate, stable reagent for iodine.

**Pathology of Cholelithiasis.**—In an excellent article on the pathological lesions and the determining causes of cholelithiasis A. S. MASCHKE (Cleveland Jour. of Med., Nov., 1901) reviews the literature upon the subject, showing that Nauyn was the first to place the subject on a scientific basis by establishing the fact that cholesterol and bilirubin-calcium are the most important constituents of gall-stones, and, furthermore, that the amount of these stone-forming substances was entirely independent of the general metabolism and diet. Kausch found no increased amount of cholesterol in the bile in any disease except cholelithiasis, and it is now generally accepted that cholesterol is the product of the mucous membrane of the biliary passages. It also results from tissue degeneration elsewhere, but its presence in the bile can be traced to degenerated biliary epithelium. Similarly the lime proportion of the bile has been found to be independent of the diet and proportion of lime salts in the blood, but depends on the production of mucus by the mucosa of the biliary passages. Cholesterol is found only in those ducts which have the same kind of epithelial cells as has the gall-bladder. Thus we see that some pathologic process of the mucosa leading to degeneration of the epithelial cells is the prime factor in causing gall-stones. Stagnation of the bile was thought to be an efficient cause, but it has been found that stagnation alone is not injurious to the mucosa. Normal bile is sterile, but when the flow becomes delayed bacteria are frequently present, especially the bacilli coli and typhosus, and these are often found within the gall-stones. Thus it happens that age, sex, pregnancy, clothing, sedentary life, etc., which usually are considered predisposing factors, serve only to bring out one important fact, that anything that favors stagnation of bile favors the occurrence of lithogenic catarrh. Cholelithiasis is then a local disease not in any way dependent upon constitutional or nutritive disturbances. Cholesterol of gall-stones has never been in solution in the bile, but has been formed from local epithelial degeneration resulting from catarrh. As cause of the catarrh any factor that favors stagna-

tion of the bile and thus renders infection possible is considered the predisposing influence.

**Elimination of Toxins in Typhoid Urine.**—Observation has shown that the urine is one of the most efficient excretions for the elimination of toxins in typhoid fever. All means, therefore, which increase the urinary toxin output in this disease are of value. L. INGELBANS and M. DENON (Comptes Soc. Biol., Dec. 6, 1901) have submitted this question to experimental research. They selected for study eight cases of typhoid fever. Four were treated by warm baths, two by cold baths and two were given large quantities of water internally, but no baths or antipyretic treatment of any kind. The urine of these patients was gathered daily and inoculated intravenously into rabbits. Thus its toxic effect was noted. They found that in those treated by warm baths the toxicity of the urine remained stationary or diminished day by day. Those treated by cold baths showed a gradual increase in the amount of toxins present in their urine, except when the temperature was considerably elevated. The urine toxicity showed a notable increase in those to whom abundant amounts of water were administered and the urotoxic coefficients were higher in this class than in either of the other two. It is thus seen that the abundant consumption of water is of great avail in ridding the system of toxins in typhoid fever.

**Thyroid Gland in Infectious Diseases.**—The study of the histological changes present in the thyroid gland in infectious diseases is of comparatively recent origin. The most recent work upon this subject comes from S. KASHIWAKURA (Virchow's Archiv, B. 166, H. 3). He examined 53 thyroids of which 38 were taken from persons dead of infectious diseases. As a means of comparison 17 were taken from persons in whom death was due to other causes. Of the infectious diseases thus studied 6 were diphtheria, 6 scarlet fever, 5 military tuberculosis, 5 measles, 4 fibrinous pneumonia, 3 puerperal fever, 2 typhoid fever, 2 septicemia and 5 pulmonary tuberculosis. Only those thyroids were selected for examination which showed macroscopically no extensive hyperplasia, since in such glands the normal hyperplastic changes might lead to confusion. The connective tissue of the gland is increased in amount in infective diseases; especially is this the case in tuberculosis, typhoid fever and diphtheria. In the majority of infective diseases the interstitial lymph-vessels show an accumulation of colloid material. By the employment of Von Gieson's stain it is possible readily to differentiate this from hyaline degeneration. As such colloid degeneration is found in connection with non-infective processes its appearance here is not characteristic. The gland substance itself is not characteristically altered. Some authors have claimed that the presence of exceedingly small follicles in this gland is peculiar to infective processes. Such is, however, not the case, for, while in many instances these were found, in many others no such condition was observed.

**Spirillum and Bacillus of Vincent in Gingivitis.**—An unusual case of gingivitis is reported by VINCE and ABAME (Jour. d. Méd. de Bordeaux, Dec. 15, 1901). The following is the clinical résumé: Patient with no history of syphilis or ingestion of mercury; soreness of gums surrounding lower incisors first noticed; two weeks later grayish-white line at edge of lower gums, the latter being red and swollen; lavage with weak solution of bichloride ordered; about a week later patient awakened in night by hemorrhage from the mouth, about half a pint of blood being lost; the following night a second hemorrhage, but less abundant; pseudomembrane gradually extending about

remaining lower and upper teeth; membrane easily removed, showing deep ulcerations beneath. Microscopical examinations revealed spirillum and the authors call attention to this case as showing the severity of lesions caused by these agents, and also as the only one on record in which the lesions were confined to the gums. Treatment by chlorate of potash was found specific.

**Action of Gastric Juice on the Bacillus Tuberculosis.**—From time to time since 1883 various observers have investigated the action of the gastric juice upon the bacillus tuberculosis. Most of the work which has been done along this line, however, has been carried on by the employment of an artificial gastric juice and is therefore not entirely conclusive as to the results which occur in man under like conditions. In order definitely to solve this problem G. CARRIÈRE (Comptes Soc. Biol., Dec. 20, 1901) has instituted a series of three experiments. In the first series he employed an artificial gastric juice composed of water, pepsin, hydrochloric acid and sodium chloride. Into this mixture he introduced tubercle bacilli obtained from various sources, as sputum, tuberculous organs and pure laboratory cultures. After various periods of time this inoculated juice was injected into guinea-pigs and the results were noted. He found that up to twelve hours no effect was produced upon the bacilli by their presence in this fluid. After this time they became attenuated but were not killed. The greater the proportion of pepsin and hydrochloric acid in the artificial juice the more marked was the attenuation. In the second series the same technic was instituted, but normal gastric juice from man was used. The same results were obtained as in the first series, but the attenuation was less certain. Sometimes no attenuation was observed even after long contact. In the third series tubercle bacilli were fed to guinea-pigs. These were killed after a varying time and with the gastric contents obtained other guinea-pigs were inoculated. In every case tuberculosis was thus produced more or less rapidly. This work is very conclusive that under normal conditions the gastric juice is without appreciable effect upon the bacillus tuberculosis.

**Internal Secretion of the Kidney.**—The idea that the kidney possesses an internal secretion was first advanced in 1855 by Claude Bernard. Since that time considerable attention has been paid to the subject and many arguments have been advanced *pro* and *con*. The most recent work comes from ALEX. N. BRITZOU (Jour. Phys. et Path. Générale, Nov. 15, 1901). Working upon the assumption that if the kidney produced an internal secretion it should be found most abundantly in the venous blood of that organ, he selected rabbits and under anesthesia, observing all antiseptic precautions, collected the blood from the renal veins. This was then defibrinated and preserved. Rabbits were then subjected to experimental uremia by the means of nephrectomy. Some of these were inoculated with various doses of the renal blood obtained as just described, and others were maintained as controls. He found that those nephrectomized animals which were not thus inoculated in a very short time died of uremia, while in those that were inoculated the uremic symptoms were ameliorated and delayed thereby and life prolonged. Such lived from one to two days longer than the uninoculated. As the result of this work he believes that the kidney produces, as do the liver, pancreas, thyroid and suprarenal glands, an internal secretion, that the venous blood of the kidney is richer in such a secretion than the arterial blood of this organ and that this secretion is of great utility in that it is able to suppress for a certain time the phenomena of experimental uremia.

**Action of Gastric Juice upon Cholera Vibrio.**—As an aid to the solution of this problem SCHULTZ-SCHULTZENSTEIN (Ctblt. f. Bakt., Dec. 11, 1901) reports the following experimental facts. In pure water containing .05 per cent. of acid the cholera vibrio is destroyed in six minutes. Water containing pepsin and traces of acid reduces the vitality of these organisms and produces in them granular formations. Pepsin and hydrochloric acid together kill the vibrio if .019 per cent. of the acid is present. Six hundred cubic centimeters of water taken into a fasting stomach contain in from twelve to fifteen minutes in 75 per cent. of cases an acidity corresponding to .03 per cent. of hydrochloric acid and such water kills cholera vibrio in fifteen minutes. In 25 per cent. of cases the acidity produced is less than this. In one instance in which .0142 per cent. of acid was present the bacilli were not killed in one and one-half hours. Fluids containing albumin or peptone or both require an acidity of .097 to .217 per cent. and one hour's contact is necessary for the death of these organisms.

**Pseudodiphtheritic Bacilli.**—Much has been written during the past few years with respect to the importance of pseudodiphtheritic bacilli. CH. LESIEUR (Jour. Phys. et Path. Générale, Nov. 15, 1901) reviews the literature upon this subject and also the means for differentiating the true from the pseudodiphtheritic organism. He reports the critical study of thirty apparently pseudodiphtheritic bacilli. Of these 60 per cent. subsequently proved to be true attenuated diphtheritic organisms, 20 per cent. were also probably in this class, 10 per cent. were in all probability of the pseudodiphtheritic variety, and only 10 per cent. were absolutely proven to be of the latter species. As the result of this work he believes that in the practical management of diphtheria from both therapeutic and preventative standpoints the existence of pseudodiphtheritic bacilli may be ignored and that all organisms which give the characteristic staining reaction when grown upon solidified serum at 35° to 37° C. for fifteen to twenty hours should be considered as true diphtheria organisms capable of producing the disease.

**Tubercle Bacillus and Associated Micro-organisms.**—To determine the influence of associated micro-organisms upon the tubercle bacillus, V. DE CIGNA (Gazz. degli Osped., No. 149, Dec. 15, 1901) placed in the thermostat specimens of sputum containing tubercle bacilli both with and without other bacteria. In each case the specimens were left in the thermostat for fifteen days, daily bacterioscopic examinations being made. In specimens showing absence of organisms other than the tubercle bacillus, or their presence in small numbers, there was rapid and marked increase in the number of Koch's bacilli; such specimens were at no time feid. Specimens containing associated bacteria in quantity showed a daily decrease, degeneration, and final disappearance of tubercle bacilli with proportionate increase in the number of other organisms. Further experiments suggested that the organism most antagonistic to the specific bacillus and contributing most markedly to its destruction was the bacterium coli. Bacterioscopic and clinical observation has demonstrated that in tuberculous patients implantation of a feid bronchitis or pulmonary gangrene upon the tuberculous condition has caused a gradual disappearance of bacilli from the sputum, with subsidence or obliteration of clinical symptoms of the original disease. The fact that the fetor of sputum in these conditions is due to protei and bacterium coli suggests the possibility of utilizing such agents or their products as therapeutical remedies. Further, the author believes, with other investigators, that, the sputum being the medium most



conductive to multiplication of the tubercle bacilli, remedies which control excessive secretion tend to check increase in the bacilli; thus, the antitoxic value of serumtherapy is reinforced by its influence over catarrhal processes.

**Gonococcus in Blood.**—The demonstration of the gonococcus in the blood-stream was a matter of difficulty until recently. A successful attempt is reported by E. UNGER (Deut. med. Woch., Dec. 19, 1901) in a case of gonorrheal urethritis complicated by an arthritis involving the ankle, hip, and wrist joints. Aspirations of blood from the median vein when mixed with bouillon or blood-serum showed on culture colonies of diplococci which decolorized by Gram stain. The author advises three precautions in the use of this method for diagnosis: (1) Use fairly large quantities (5 c.c.) of blood, so as to obtain as many bacteria as possible; (2) dilute the blood considerably, so as to decrease its bactericidal properties; (3) select a fluid culture medium, which permits rapid, unresisted development.

### MEDICINE.

**Undescribed Symptom of Carcinoma.**—The presence of very small angiomas of the skin in cases of carcinoma in various parts of the body has been frequently met with by D. LESER (Münch. med. Woch., Dec. 17, 1901). The changes in the skin consist in bright red or bluish-red areas, varying in size from pin-point to lentil, and slightly elevated above the surface. They are sharply circumscribed, do not disappear on pressure, and occur most frequently on the trunk, rarely on the extremities and almost never on hands and feet. Sometimes they are most frequent in the neighborhood of the tumor and the microscope shows dilated and proliferated capillaries. Of 50 cases of carefully examined, undoubted cases of carcinoma, these angiomas were absent in only one. In normal persons and those afflicted with other diseases they occasionally occur, but then only in advanced age and much fewer in number. The author has had no experience as to their frequency in sarcoma or as to their value in the early diagnosis of carcinoma before the presence of other signs.

**Methylene Blue as an Indicator of Renal Function.**—Information of value as to the condition of the kidney can be obtained by injecting 5 centigrams of methylene blue subcutaneously and then allowing the patient to urinate at frequent intervals. The kidneys perform their function normally if the excretion begins after one-half hour, reaches its maximum in three or four hours to disappear in from thirty-five to fifty hours. It is not sufficient merely to view the urine through transmitted light; to detect small quantities it must be shaken out with chloroform. K. ASSFALG (Zeitsch. f. klin. Med., Vol. 44, Nos. 3 and 4) has investigated various diseases and finds that in chronic interstitial nephritis the excretion is prolonged sometimes up to nine days; in severe chronic alcoholism the excretion begins late and ceases soon; in uncompensated heart disease there is no change as to time that does not belong to the normal, but, owing to the concentration of the urine, its color soon becomes intense; in bichloride poisoning no aberrations were noted; the same was true of cirrhosis of the liver, while arteriosclerosis and traumatic neuroses gave changes similar to those of interstitial nephritis. For the diagnosis of parenchymatous nephritis the method is inefficient. The exact site of excretion in the kidneys is still a disputed point.

**Enlargement of the Hands and Feet.**—Several cases of symmetrical enlargement of the hands and

feet, depending upon increase in size of the skin, and with this drum-stick deformity of the end-phalanges and nails, intermittent edema, exacerbating pains and tenderness of the nerve-trunks, are described by H. HIRSCHMANN (Zeitsch. f. klin. Med., Vol. 44, Nos. 3 and 4). It was possible in only one case to ascertain the primary pathological lesion in the form of an interstitial neuritis of the larger nerves. The author cannot classify these cases among the *osteo-arthropathie hypertrophique* of Marie, since the Roentgen rays showed no thickening of the bones, but he does not deny the close association between this and the lesion under discussion, which he names *dermatohypertrophie vasomotrice*. In all cases described in the article there was present a primary lesion accompanied by disintegration of tissue. The casual connection between this and the hypertrophy, however, remained obscure.

**Typhoid Spine.**—The history of an interesting case is contributed to the literature of this subject by W. J. TAYLOR (Phila. Med. Jour., Dec. 28, 1901). Since the appearance of Gibney's original paper in which the "typhoid spine" is described as a perispondylitis, various opinions have been advanced as to its true nature. Three conditions may arise after typhoid referable to the spine: First, the true perispondylitis of Gibney; second, a painful condition of the muscles due to strain or injury; third, the hypersensitive neurasthenic spine. Although most authors do not recognize these distinctions and think that they all border on neurasthenia, the writer believes that in certain cases there is a definite well-pronounced pathological condition involving the periosteum, ligaments, and deep fascia of the spine—a distinct surgical sequel of typhoid fever. It is recognized that the typhoid bacillus may cause a periostitis which resolves without suppuration, although the latter often occurs. As this has been observed to occur in the tibia, why may it not occur in the spine? In the case cited by the author, an adult patient had an ordinary attack of typhoid lasting nine weeks. A few days after getting up the heavy dull pains in the back began: Examination showed a slight prominence of the spine to the right of the sacrum and in the lumbar region, with numbness extending along the right thigh. Patient was kept in bed for nearly four months on ordinary tonic treatment. Improvement took place rapidly and three months later the spine was perfectly flexible and the thickening had disappeared.

**Clinical Import of Arteriosclerosis.**—In a paper dealing with abnormal conditions of the viscera depending upon arteriosclerosis, J. G. URUENA (Gac. Med. d. Mexico, Dec. 15, 1901) calls attention to the importance of examining the arterial condition, especially in patients presenting cardiac symptoms, as the heart stimulants which might be valuable in valvular disease would be of the greatest disadvantage to the patient with inelastic arterial walls. The author urges the employment of the classical remedies for this condition, i.e., potassium iodide and nitroglycerin; the former administered for twenty days by the mouth in 50-centigram doses, the latter ten days in 3-minim doses. With systematic perseverance in this method of treatment, cerebral distress, cardiac palpitations, and murmurs have subsided when due to peripheral resistance from arteriosclerosis.

**Traumatic Apnea.**—Traumatic apnea is a condition rarely seen in the living. In a case reported by H. L. BURELL and L. R. G. CRANTON (Boston Med. & Surg. Jour., Jan. 2, 1901) the patient sustained a crushing injury to the chest, which was held by antero-

posterior compression between an electric car and a door-post for fully three minutes; on the removal of the car he fell unconscious. Admitted to the hospital an hour later, he was still unconscious; pulse 100, weak but regular; respirations 30, shallow. Several ribs were fractured and there was an area of subcutaneous emphysema. A striking feature was the condition of the skin, which, from the third ribs upward over the neck and face, presented a dusky, bluish, mottled appearance. Cyanosis was suspected, but was not the cause, inasmuch as the color was not general over the body, as it did not disappear on pressing the skin, and as it persisted after the patient's general condition improved. Eight days after the accident the blue color began to fade. On his admission to the hospital the patient was in a condition of extreme shock and was stimulated by nitroglycerin, atropine and strychnine, with ice-cap to the head and warmth to the body. Ollivier's theory is that the skin appearance seen in these cases is due to stasis of carbonized blood in dilated and temporarily paralyzed capillaries. History of compression of the chest, evidence of such compression (broken ribs, contusions, etc.), with absence of respiration, unconsciousness and apparent death, with the localized coloration already described, are important for diagnosis. If the patient is seen directly after the injury artificial respiration must be begun at once; the secondary or late treatment is to combat shock in the manner described above.

**The Pathogenesis of Complications of Vincent's Angina.**—A variety of morbid conditions secondary to ulceromembranous lesions of the mouth, due to the bacillus of Vincent, have been studied by SIMONIN (*Gaz. heb. de Méd. et de Chir.*, Dec. 19, 1901). These conditions may be cutaneous (polymorphous eruptions, purpura hemorrhagica) or may involve serous membranes (arthralgia, pleurisy) or may affect the great vital organs (bronchopneumonia, nephritis, myocarditis). These various complications appear to be due to the common pyogenic bacteria, principally the streptococcus. The associated bacteria of Vincent (fusiform and spirillum) merely produce the local ulcer which furnishes the port of entry to secondary infection; inoculation of animals with this group proves its inability to generalize itself in the body. The tongue and the mouth, presumably on account of their relatively poor lymphatic defense, are especially dangerous sites of ulceration from the standpoint of secondary infection; ulceration of the tonsils is less dangerous. The intensity of the secondary infection is often so great as to lead the clinician to neglect the primitive lesion. It is essential to promote cicatrization of the primary ulcer; for this purpose iodine, peroxide of hydrogen, methylene blue and silver nitrate are recommended.

**Method for Determining Pyloric Insufficiency.**—It is well known that the usual methods for determining insufficiency of the pyloric end of the stomach are either impractical or inefficient. C. B. QUINOLLO (*Klin. therap. Woch.*, Dec. 8, 1901) recommends that a double sound be introduced into the stomach, one end of which has connected with it a small balloon, while the other permits it to fill with air and also records upon a drum any changes in the pressure within the bladder. If, on introducing the balloon and moderately distending it with air, when in the stomach, light percussion be performed over the gastric area, moderate excursions will be recorded upon the drum. If, however, the normal tone of the pylorus is absent, the endogastric pressure will not be increased, since the distention of the balloon will at once be followed by an escape of the gas normally present into the duodenum, so that

even strong percussion will give a straight line instead of a number of curves upon the registering instrument.

**Symptomatology and Therapy of Chronic Emphysema.**—Cases of acute emphysema with sudden increase in the rapidity of the heart's action have been described by Tuzcek and others as a neurosis of the vagus. The condition is apparently one of stimulation of certain fibers of the vagus occurring simultaneously with paralysis of other fibers of the same nerve. Attention is now directed by G. ZUELZER (*Berl. klin. Woch.*, Dec. 23, 1901) to a series of cases in which emphysema was associated with slowing of the pulse; in the interpretation of these cases the writer assumes that the pulmonary and cardiac fibers of the vagus are here both in a condition of irritation. The patients were nearly all male adults, whose ages ranged from eighteen to forty-five years. They complained of a sense of oppression in the chest. Shortness of breath followed physical exertion so much that it interfered with occupations demanding such exertion. Cough and expectoration were absent. Cardiac auscultation was negative; percussion showed a concealment of the normal area of cardiac dullness, due to the extension of pulmonary resonance. The frequency of the pulse in the several cases was from 42 to 64 a minute. Partly because of the results of experiments on animals, and partly because in the cases clinically observed pressure over the vagus at the border of the sternocleidomastoid caused exquisite pain, the author regards these cases as primarily instances of vagus neurosis. This theory is supported by results of the administration of atropine. Zuelzer states that after giving 1 milligram of atropine subcutaneously he noticed within from 10 to 15 minutes a retraction of the lower border of the lung and a marked increase in pulse frequency. The sense of oppression in the chest disappeared at once, and after atropine had been given by mouth once a day for eight or ten days the sensitiveness to pressure over the pneumogastric also vanished.

**Paratyphus.**—Now that the Gruber-Widal reaction in typhoid fever has come to be a generally tested and accepted symptom of the disease, the significance of a certain small residue of cases in which the reaction fails to occur has aroused a great deal of curiosity. The literature bearing upon this subject has been ably summarized in a recent article entitled "Paratyphus" by MELTZER (*N. Y. Med. Monatschrift.*, Dec., 1901). Within the past two years more than a dozen cases have been described in which the clinical diagnosis of typhoid fever was not confirmed by the agglutination test with the Eberth bacillus, but in which the sera reacted promptly to certain other bacteria which could be isolated from the blood or from the excrements. The first case was described by Gwyn of Johns Hopkins in 1898; then followed six from a single epidemic in Hamburg in the same year, and eight from the epidemic of 1901 in Bremen. In all there were headache, prostration, continuous fever, slow pulse, enlarged spleen, roseola, and the diazo-reaction, epistaxis, intestinal hemorrhage, delirium, slight pulmonary affections, and post-typhoidal osteomyelitis occasionally occurred. In short, the cases were clinically typical typhoids. All but three of the cases ran a course somewhat milder than the ordinary typhoid. As none of them were fatal, there is no pathological anatomy. The Widal reaction was absent in all of them. In the case of Gwyn and in the eight cases of Schottmueller in Hamburg bacteria which were agglutinated by the sera of the patients even in high dilution were isolated from the blood. In Kurth's cases from Bremen the bacteria were found in the stools, and were likewise agglutinated. It is extremely important that both in the Hamburg and in



the Bremen epidemic, every case of "typhoid" which failed to give a positive Widal reaction yielded a specific organism which reacted to the serum test with the blood of the individual in question. All the micro-organisms thus isolated are very similar in character, and belong to the so-called colon-typhus group. They are more or less motile, have flagella, and do not liquefy gelatin; from the colon bacillus they are distinguished by the fact that they do not coagulate milk, do not ferment lactose, and do not form indol; from the typhoid bacillus, they differ in producing gases, in fermenting glucose, and in alkalizing the media. Other pathogenic bacteria of the same group are the bacillus of hog-pest and of epidemic dysentery. Meltzer believes that the results above summarized are universally applicable. He holds that only such cases as give a positive Widal reaction are to be considered as typhoid fever. All the other cases clinically resembling typhoid that fail to give the reaction are caused not by the bacillus of Eberth, but by certain other forms which belong to the same general group. These cases constitute from .5 to 5 per cent. of the cases of "typhoid," according to the varying statistics of different pathologists. They compose a group which he would designate as paratyphus.

**Gastric Neurasthenia.**—If there is any branch of medicine in which the physician may entertain original notions upon symptomatology and treatment, without the fear of conflicting with an established and definite code, it is the field of functional diseases. Of this privilege Dr. HENSCHKE (Edin. Med. Jour., Jan., 1902) has liberally availed himself. He accepts the broad general subdivision into neuroses of sensation, of motility, and of secretion. He is convinced, however, that the importance of the secretory neuroses has been enormously overestimated. With the exception of occasional and unimportant departures, he has found that the composition of the gastric juice is practically normal in all cases of nervous dyspepsia. The neuroses of motility, on the other hand, are of the first importance, and of these the myasthenic forms are the most frequently met with. There are three stages of muscular inactivity of the stomach. In the first, clapping is obtainable, but the peristaltic activity is sufficient to empty the stomach before the next meal. In the second, the stomach cannot empty itself before the next meal, but does so during the night. In the third, or stage of atonic dilatation, the stomach does not empty itself during the night, and thus always contains food residues. The most important of the sensory neuroses is hyperesthesia, which gives rise to pain and tenderness. The symptomatology of the gastric neuroses corresponds to the above conception of their nature. Succussion, gastroptosis, the presence or absence of food residues after varying intervals of time, are the chief indications of disease. Painful spots may be present. No diagnostic information is to be obtained by the chemical examination of the gastric juices. The special treatment must first obviate any sources of irritation of the gastrointestinal tract. All dental defects are to be remedied, and chronic fecal retention is to be combated by colon irrigations. The dietary indication is primarily to offset the myasthenia. This is done by ordering small and frequent meals, say five or six during the waking day. The nature of the food is determined by the percentage of hydrochloric acid in the secretions. If there is hyperchlorhydria, he gives foods which, while having a high combining value with the acid, tend to stimulate the secretion of it in the least degree, namely, sweetbreads, brains, oysters, egg-albumin, plasmon, milk. In combating constipation, it is to be kept in mind that this is generally of the spastic type so that the usual

stimulants are contra-indicated; Fleiner's injections of warm olive oil at bed-time are recommended. As regards drug treatment, the author believes that the only medication is nitrate of silver in doses of  $\frac{1}{4}$  grain, in palatinoid form, three times a day, or quinine bisphosphate in doses of  $\frac{1}{4}$  grain. Upon the physical means of restoring tone to the system the author lays very great stress. Static electricity is to be used in cases in which a general sedative tonic is indicated. In cases in which stimulation is needed, the "sinusoidal bath" is highly lauded and thoroughly explained. Finally, the author makes frequent use of Einhorn's intragastric spray apparatus in cases demanding local treatment of the stomach, upon the theory that it enables one to apply a very small amount of a concentrated solution over a large area of stomach; in other words, to get the direct without the poisonous effects of the drug.

**Cocaine Habit.**—The effects of cocaine alone are so intense and exhilarating that the person addicted to the habit soon takes whisky or morphine to counteract the effects which would otherwise probably end in acute mania. E. H. MARTIN (Med. Times, Jan., 1902) says that the cases of cocaine and morphine habit are generally among white people, while the combined use of cocaine and whisky appears more frequently among the blacks. The latter two drugs seem to smother all moral sensibilities. Insomnia and anorexia are prominent symptoms and lead to more whisky. The action on the genitals is peculiar. Whether the drug is excreted in the urine, causing anesthesia of the urethra and glans, or whether the sexual centers in the brain are affected is not known, but cocaine always causes the penis to become shrunken and bloodless. Where morphine also is taken the desire is destroyed, but cocaine and whisky markedly stimulate the sexual appetite, erection being, however, impossible, and sexual perversion frequently results. In regard to treatment, the cocaine habit is similar to the whisky habit and can be stopped if the patient has any will power left. A few days' bracing with strychnine is all that is usually necessary, but it sometimes happens that there is great difficulty in giving the victim enough will power. The great increase in the use of coca and coca-cola will undoubtedly lead to there being as many users of these drinks as there are now of coffee, and the effect which the continued use of small doses of cocaine has will probably be more fully understood.

## NEUROLOGY AND PSYCHIATRY.

**The Bladder in Syringomyelia.**—The great variety and confusing diversity in the symptoms of this nervous disease make it a matter of great importance to settle such points as its relation to the bladder. J. ALBARRAN and G. GUILLAIN (La Sem Méd., Dec. 4, 1901) have observed in cases of syringomyelia severe bladder troubles, with pain, blood in the urine and retention. Such have caused them to examine more minutely patients of this class for latent and obscure bladder troubles, when no particular subjective symptoms directed attention to that organ. The first series of persons examined was four. Three of them had latent retention, respectively of fifty, eighty and one hundred and twenty-five grams of urine. The fourth had no retention. In another series of six patients, three had latent retention, one had cystitis with multiple ulcerations of the bladder, incomplete retention and a secondary formation of irregularities in the mucous membrane, and another had total retention with widespread, discrete ulcers. Only one of the patients had a normal bladder. It is therefore apparent that contrary to the classical opinion, symptoms proceeding from the bladder are common in syringomyelia. In some subjects these

troubles are latent, with full or incomplete retention of aseptic urine; but this very state creates a soil favorable for the development of infections of the bladder. Therefore such symptoms break out suddenly as soon as these infections have reached a certain degree or as soon as retention itself causes them mechanically. Moreover, they have found lesions of the bladder which present a number of peculiarities far removed from the lesions of ordinary cystitis and similar to those found in chronic retention of the urine. The multiple small ulcers and the large extensive discrete ulcers of the mucous membrane and the perforations of the bladder are the final degrees of those lesions, which should be regarded as taking their origin in trophic changes due to nerve damage and springing from trouble in the spinal cord due to the syringomyelia. The trophic alterations in this disease are very frequent and really determine the classic symptoms of it. Therefore, it is not surprising that they should in certain cases affect the bladder also. In syringomyelia the ordinary difficulty of retention of urine, either aseptic or infected, develops really on a special trophic soil, which in itself should be made part of the pathogenic elements in all the lesions which one observes. Changes in the contractility of the bladder-wall have been proven. Death may follow ulcers of the mucous membrane of the bladder. The final conclusion is that one should examine in a systematic manner the bladder of all patients suffering from this disease, and as soon as any urinary troubles appear should give them careful and persistent treatment in order to obviate the later and fatal stages.

**Diphtheritic Paralysis.**—The causes of paralysis in diphtheria have been made the subject of a fairly thorough pathological investigation by FOULERTON and THOMSON (Edin. Med. Jour., Jan., 1902). They studied the nervous system in nine guinea-pigs which had been injected with filtered diphtheria broth in varying quantities, and also in a number of children who died of the disease. They come to the conclusion that the paralysis may be either central or peripheral in origin. In the former case, the anterior horn cell first becomes the seat of degenerative changes, as evidenced by abnormal staining reactions, while the nerve-fiber is still normal in appearance. A secondary descending atrophy of the nerve, however, follows upon the disease of the central cell. In the latter, or peripheral type, of which the common palate paralysis is an example, the muscles paralyzed are those in connection with peripheral nerve fibers which come into close relation with the seat of toxin-formation in the throat and nasopharynx. The central paralysis is toxic in origin; the peripheral are due to local and direct irritation. The latter have, of course, the better prognosis.

**Aphasia During Convalescence after Evacuation of Brain Abscess.**—Since the publication of Macewen's work the subject of otitic brain abscess has received less attention from the neurological than from the otological point of view. Such evidence as is afforded by the reports of the cases of Muller, Kühn, Koe, Burnett, Steinburger and Moss points toward impaired function of the auditory word center as a cause of the resulting aphasia. G. L. WALTON (Boston Med. & Surg. Jour., Dec. 26, 1901) made a study of Dr. Jack's patient with a view to determining the variety of aphasia present. The details of this examination bear marked resemblance to those in the case of Marie and Sainton, in which autopsy confirmed the localization in the temporal region. The details of the examination conducted by Walton cannot be reproduced here, but it may be said that the case corroborates the views of Broca and Troussau, who first maintained that there is no writing center in the sense of a center

in which are stored up the kinesthetic memories of written words and capable of stimulation independently of Broca's convolution. The inability to write in this case was absolutely coincident with the inability to talk. When the auditory center either failed to recall the memory of the sound of the word, or, if remembered, failed to convey the stimulus properly to the kinesthetic speech center, it failed also to communicate it to the center for the movements of the hand. That the centers and fibers affected were not destroyed is shown by the complete recovery.

**Angioneurotic Edema.**—This condition, known also as Quincke's disease, is a neurosis of the vasodilators characterized by tumefaction in different parts of the body, affecting the skin and subcutaneous tissues, rarely the mucous membranes, says P. C. MADINOS (Gazz. degli Osped., No. 149, Dec. 15, 1901). Little is known of its pathogenesis; all observers of the phenomenon have agreed that the nervous system is concerned in it, Richel holding that it is of central origin, Quincke that it is due to the peripheral nerves. Heredity seems to have some influence, Osler noting its appearance in five successive generations. The author has found a certain connection between the affection and a tuberculous family history. Four cases are cited; the most typical one is given in detail: Young woman, about twenty-five years of age; edema appeared in some part of body two or three days before the menstrual period, spreading from original point, or subsiding there, to appear in other parts successively; feeling of tension in the skin and slight pain on pressure; swelling rather well defined, pale red, pitting when pressed with finger; local temperature elevated. This condition continued for about ten days, then subsided, to reappear upon the approach of the next menstrual period. Treatment with bromides, valerian, and ergotin having failed, recourse was had to faradic electricity, treatment being administered daily for from ten to fifteen minutes. The positive pole was applied to the side of the neck in the course of the sympathetic, the negative to the affected part. After thirty days there was marked improvement and two months' treatment effected a complete cure.

**Specific and Non-Specific Lesions of the Brain.**—The lesions of the brain that may result directly or indirectly from syphilis can be divided into three classes: (1) those that are caused by the syphilitic poison and by nothing else; (2) those that may have a specific or a non-specific origin; (3) the non-specific lesions that occur as indirect results of the syphilitic virus. J. T. ESKRIDGE (Jour. Amer. Med. Assoc., Jan. 4, 1902) calls attention to the importance of distinguishing between the specific and non-specific lesions, as only the former are especially amenable to antisyphilitic treatment, while the numerous injuries caused by the presence of syphilitic lesions or the degenerations resulting from toxic or other blood states which may result from syphilis, are in no way specific in character and do not yield to this form of treatment. While gumata are the specific lesions, these by their presence in lessening intracranial space, by their irritating effects, by encroaching on and injuring adjacent structures, produce intracranial lesions that are in no way specific in character.

**Cause of Narcolepsy.**—Pathological somnolence has usually come under the observation of a neurologist, but, as the prime inducer of this diseased condition probably does not arise within the brain, the general physician should be more interested, and an endeavor made to determine the true etiological factors. H. STERN (Med. Rec., Jan. 11, 1902) describes a case which has been under his care for some time. A car con-



ductor, aged thirty-five, of good habits and no important family history, had for months been seized each day with an almost irresistible desire to sleep, the attack coming on regularly about ten o'clock in the morning and lasting till three in the afternoon. There was free perspiration at all times and especially just before the attack. Physical and clinical examinations carefully made several times were negative except for a somewhat dilated stomach and hyperchlorhydria, high urinary density and acidity, with urinary chlorides greatly in excess. There were a diminished blood alkalescence and a low urinary toxicity both before and after the attack. Variations in diet and medication had no effect on the condition. Analyses showed that the patient egested in twenty-four hours about as much chlorides in his urine as he had ingested in the milk which formed his entire diet. Since he has hyperchlorhydria and perspires very freely, especially just before the attack, it follows that for certain periods of the day the output of chlorides must exceed the supply and there exists a deficiency in the blood. Since vital processes are largely dependent upon the osmotic tension of the blood and since chlorides appear to play the most important rôle in the osmotic tension of the body fluids the depression of the nerve centers in the case reported seems to be due to the diminution of chlorides in the blood.

#### HYGIENE.

##### The Destruction of Rats by Bacterial Agencies.—

The significance of these rodents as a factor in spreading the bubonic plague has led to several methods directed toward their extermination. A specific pathogenic bacillus has been described by DANYSZ, and used by him with favorable practical effect. Another series of trials has been made and new statistics collected by R. ABEL (Deut. med. Woch., Dec. 12, 1901). In his laboratory experiments the rats were fed with the pure culture and died in from six to twelve days. The livers and spleens of these animals were again fed to others; the latter promptly succumbed. This method was continued through six generations. Experiments tried outside of the laboratory varied as to the apparent results. In all cases but few dead bodies were found, this being probably due to the well-known natural aversion to dangerous localities which these rodents possess. Certain much frequented resorts were entirely deserted for several years. Experiments on ships were very unfavorable. It seemed necessary in all instances to introduce large amounts of the culture. The chief indication in future investigations will be to devise some more practical and effective method of administration.

##### Hydrocyanic-Acid Gas as a Disinfecting Agent.—

Several experiments have recently been made by J. S. FULTON and W. R. STOKES (Maryland Med. Jour., Dec., 1901) in the endeavor to show the efficacy of hydrocyanic-acid gas as a germicide; but since the cost of room-disinfection with this gas is about four times that of formaldehyde disinfection, since the gas is more dangerous than formaldehyde, and since the only advantage in the use of hydrocyanic acid is lessened risk of fire, these observations may be considered as being more interesting than valuable. In the treatment of various parasitic diseases of plants this gas has been successfully used by inexpert persons since 1897. A convenient apparatus was arranged by which the gas was not liberated for a few seconds after being started, thus allowing one time to leave and close the room. Various kinds of insects, rats, mice and guinea-pigs were experimented upon and all died within a few minutes. Formaldehyde has been proven to be ineffec-

tual in killing vermin of ships and mosquitoes conveying yellow fever. Sulphur dioxide is here more efficacious and it is for this purpose that hydrocyanic-acid gas may be found most useful. With ordinary care there is slight danger to human life, as the gas can easily be detected and avoided. It has no effect upon foodstuffs and in no way injures furniture, paintings or merchandise.

##### Bacterioscopic Versus Chemical Examination of Water.—

With the effluvium of filth which follows the oil-like spread of mankind over the earth's surface, there arises with rapidly-increasing import the question to drink, or not to drink, of a given crystal water. The chemists have been having their own way in deciding this point, perhaps because there were, until now, easier and more fruitful fields for the bacteriologist to pasture in, but, if the conclusions of A. C. HOUSTON (Brit. Med. Jour., Dec. 21, 1901) are consulted, it appears that the retort and the flame will soon have to give way to the culture and the incubator. It will be seen that the very essence of this able paper is this: The author shows that the pregnant question to be answered is *not* whether certain pathogenic forms are present, but what is their relative abundance? In conclusion, he makes the following statements: (1) From the public health point of view it is the adventitious and perhaps dangerous bacteria, rather than those peculiar to water, which demand attention. (2) As sewage is the most common and dangerous source of the pollution of potable water, further knowledge of the bacteria characteristic of sewage is required. (3) Bacteriologists have hitherto almost entirely neglected the question of the relative abundance of micro-organisms of different sorts in pure and impure substances; for example, water as compared with sewage, virgin soils with polluted and cultivated soils, etc. (4) Attention to this question of relative abundance has a most important bearing on the bacterioscopic analysis of potable waters from a public health point of view, because it shows that a biological distinction between pure and impure substances (for example, water and sewage) is so great as to be almost inconceivable, so great as to render the adoption of rigid and stringent bacteriological standards unnecessary and inadvisable, and so great, also, as to allow the bacteriologist to detect in a water the presence of objectionable polluting material so small as to be far beyond the reach of chemical analysis. (5) Streptococci are absent from 10 c.c.m. (or more), bacilli coli from 1, 10, it may be 100 c.c.m. (or more) and bacilli enteritidis sporogenes from 100 to 500 c.c.m. (or more) of pure waters; that is, these microbes are altogether absent, or relatively so, from pure waters. (6) These three germs are commonly present in  $\frac{1}{1000}$  c.c.m.,  $\frac{1}{10000}$  c.c.m. and in  $\frac{1}{100}$  to  $\frac{1}{1000}$  c.c.m. respectively of crude sewage, that is, these microbes are present in crude sewage in great abundance. (7) It is evident from these figures that there are tests in the bacterioscopic examination of water which far surpass in delicacy any known to the chemist. (8) A stage may be reached in the pollution of water with sewage when the contaminating material is so small in relation to the bulk of water as to be inappreciable by chemical means, yet yielding to bacteriological tests unequivocal evidence of gross pollution with germs of intestinal origin. (9) The presence of streptococci is to be thought of as indicating extremely recent, and bacilli coli less recent though still not remote pollution of animal sort, but the presence of bacilli enteritidis sporogenes cannot be considered to afford evidence of pollution bearing a necessary relation to the recent evacuation of animals. (10) Organic matter *per se* is, so far as is known,

harmless; it is the bacteria apt to be associated with the organic matter that constitute the element of danger. (11) It is not necessary to demonstrate in a polluted water supply the presence of definitely pathogenic microbes to prove that there is danger in drinking such water. (12) It is sufficient to show that microbes of intestinal origin are present in a water to condemn it. (13) Valuable as the chemical analysis of a water undoubtedly is, it should in the future occupy a secondary position, and the bacteriological examination should take its place in judging our water supplies.

### THERAPEUTIC HINTS.

**Resorcin Poisoning.**—A case of this kind in an infant five days old is reported by A. CAILLÉ (Pediatrics, Dec. 15, 1901). Resorcin, gm. 0.015 (gr.  $\frac{1}{4}$ ) every four hours, was ordered, and after the sixth dose the child became cyanotic, pulseless, cold and clammy, and the urine voided before collapse set in had a smoky color. The child was given a hot bath (110° F.) every two hours and kept warm by hot-water packs; the bowels were flushed with a very warm saline solution every three hours, and warm sweetened tea was given by spoon frequently. As soon as the child was out of collapse it was put to the breast, and in a few days its recovery was complete.

**Scarlatinal Nephritis.**—The patient should be kept in bed on fluid diet, wearing flannel next to the skin. The flow of urine may be increased by plain or carbonated water with bitartrate of potassium or other saline. Prolonged sweating, brisk purging, etc., should not be practised together, but alternately. If oliguria is pronounced or uremia threatening, normal salt solution at 105° to 110° F. may be injected by rectum. This dilutes the toxins and favors their elimination, and lessens the vasomotor constriction. Digitalis ought not to be employed. Calomel, gm. 0.003-0.006 (gr.  $\frac{1}{32}$ - $\frac{1}{16}$ ), given every hour, is diuretic, laxative, sedative to the stomach, and reduces arterial tension. Strychnine, dry-cupping for dyspnea, and, if convulsions occur, chloral, hot-packs, and salt water irrigations may be employed. In coma, sodium caffeine benzoate, subcutaneously, braces up the heart, rouses from stupor and starts diuresis. Renal hemorrhages are best treated by hot applications over the loins, mustard plasters and absolute rest. Suprarenal may be tried. Only small quantities of liquid food at frequent intervals should be taken, such as broths, clear soups, equal parts of milk and oatmeal water, etc. In general alcohol is contra-indicated, but cold champagne, c.c. 4.0 (Si), with ice, every ten to thirty minutes, may be given for frequent vomiting and dry tongue. When edema is marked, dyspnea excessive or pulmonary edema impending, hot packs or hot-air baths may be used. The danger of nephritis is greatest during desquamation. During convalescence, the patient must be kept in bed, or in the house, avoiding exposure or too great muscular activity. The anemia requires iron.—F. HURR in Pediatrics, Dec. 15, 1901.

**Follicular Conjunctivitis.**—Mild cases may be cured by rubbing the everted lids with copper sulphate or alum and washing the excess off with sterile water. This may be done two or three times a week, in the interval a solution of zinc sulphate, 0.2-0.4 per cent. (gr. i-ij to Si) being instilled three times a day. But operative procedure is more rapid and very effective. With the usual aseptic precautions, and having applied cocaine, pass one blade of Knapp's roller forceps, or

Gifford's forceps, well back into the conjunctival cul-de-sac, and the other over the everted conjunctiva, and with firm pressure pull from the eye. This breaks down and squeezes out the follicles. In the retrotarsal fold and near the canthi are points which cannot be reached by the Knapp forceps, and the Gifford instrument is better. After this procedure, mop the lids with bichloride, 1:500, washing off the excess with boric acid solution or sterile water. Repeat every one or two days, using the zinc sulphate solution from one to three times a day.—J. W. BULLARD in Western Medical Review.

**Pneumonia in Children.**—If there is much pain at the onset it may be relieved by mustard paste, but later in the disease G. GROTHAN (Western Med. Review, Oct. 15, 1901) prefers to apply to the chest once or twice a day, a flannel saturated with equal parts of lard and turpentine. Over this should be placed a cotton-jacket covered with oiled silk. Flaxseed poultices should not be used. During the early part of the disease but a small quantity of food, if any, should be given, and throughout the disease little food and more water are desirable. The main indication for treatment in ordinary cases is to clean out the bowels and maintain excretions. Hyperpyrexia is treated by cold to the head and cold sponging. The author condemns coal-tar products as a "class" of pernicious drugs. In a severe case calomel may be given, with an intestinal antiseptic such as guaiacol carbonate; later, salicylate of sodium every two hours and the aromatic fluid extract of cascara. The bowels should move at least every twelve hours and if sluggish may be stimulated by normal salt enemata. The kidneys may be kept working by liquor ammonii acetatis, slightly alkaline, made fresh daily and administered every two hours. Strychnine sulphate, gm. 0.0002 (gr.  $\frac{1}{5000}$ ), every three or four hours for a one-year-old child, should be given throughout. Sudden general collapse may be combated by strychnine and nitroglycerin hypodermically. The hot mustard bath, begun at 100° F. and raised to 110° F., may be used for ten minutes for cardiac or respiratory failure with cyanosis, cold surface, rapid pulse and respiration and extreme nervousness. Cold, or bromide and chloral, will combat nervous irritability and sleeplessness. Codeine sulphate may be given guardedly for pain and cough.

**Puerperia.**—In certain cases of this affection, M. BALZAR (Revue de Thérapeutique, Nov. 15, 1901) advises a warm bath every day or every two days, in which is placed

- R Oil of cade..... 45.0 (Siss)
- Fluid extract of quillaya, c.c. 20.0 (Siv)
- Yolk of one egg.
- Water to make.....c.c. 240.0 (Sviij)

Make emulsion and mix with a pail of water and then add to the bath.

**Recurring Gonorrhea.**—The internal administration of drugs is of little or no use, urethral irrigation having the greatest value. A quart of warm solution is flushed through the urethra once daily, the formula being:

- R Zinci sulph.
- Alum, aa..... 0.05 (gr. i)
- Acidi carbol..... 0.03 (gr. ss)
- Aque, q.s. ad.....c.c. 1000.0 (Oij)

Twice daily give an ordinary urethral injection of protargol, gm. 0.05 (gr. iv), in water, c.c. 30.0 (Si). This treatment is to be continued for from six weeks to two months.—GERALD DALSH in British Medical Journal.



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## A WIDER VIEW OF MULTIPLE NEURITIS.

MULTIPLE NEURITIS was once considered a comparatively rare affection, but at the present time its widespread occurrence is attracting considerable attention and more careful study is being devoted to its manifold etiology.

The careful presentation of the causation of this affection in this week's issue of the MEDICAL NEWS, coming from so well-known an authority as Dr. M. Allen Starr, serves to bring into prominence certain etiological factors which have been obscure and others which have been neglected. The discussion also opens up an important field of medicolegal interest bearing on the relation of certain noxious trades and diseases of the nervous system.

The recent outbreak of arsenical neuritis in England, already referred to editorially in the MEDICAL NEWS, has served to focus the attention of neuropathologists on the rôle played by the metallic poisons in the production of peripheral nerve lesions. In Dr. Starr's paper it will be seen that the growth of many new industries in the United States in which arsenic, copper and lead are widely employed, is attended with a proportionate increase of danger to the working community, and physicians and legislators will do well to carefully scrutinize the factory inspec-

tion reports of European countries in order to avoid many of the pitfalls therein laid bare. Many of these industries are only in their infancy in this country, and a careful study of the cases of neuritis coming to us for diagnosis and treatment is imperative.

Alcohol as a causative factor in multiple neuritis has been recognized for many years, but it is of service to reflect that many "patent medicines," "tonics," "restorers," "blood purifiers," etc., are disguised alcoholic mixtures.

With the enormous output of rubber goods, bicycle, and automobile tires and innumerable electrical devices, the importance of poisoning by carbon disulphide is to be considered, and much more so the effects of the numerous synthetic coal-tar products, since every household now has its own box of headache, neuralgia and painful menstruation tablets, purchased from the druggist on his, not the physician's, responsibility.

It is particularly interesting to note that, from the neurologist's standpoint, confirmatory evidence of the value of antitoxin in diphtheria is found in a marked diminution of the cases of neuritis due to this disease. Attention is also called to the fact that our foreign possessions are going to bring a wider acquaintance with forms of multiple neuritis due to beriberi and the severer types of malaria.

Dr. Starr has thrown some light on a large group of cases heretofore regarded as idiopathic. These are really due, he says, to infections, many of them probably influenza-like, others perhaps gastro-enteric, still others due to the toxins elaborated in the rheumatic or gouty dyscrasie.

That Nature yields her secrets only after the most continued study is made apparent by this important résumé, and there still remain some cases which must, for the time, be regarded as idiopathic.

## THE STATE CHARITIES BILL AGAIN.

THE intense excitement caused by Governor Odell's State Charities Bill shows that the people of the State, as well as those more intimately concerned with the management of the State Hospitals, realize that its success would be a degradation to the honor of our commonwealth.

The system by which the New York State Hospitals for the Insane have been looked after and improved by the voluntary service of the distinguished men of the community has been pointed out as an example to other States and other nations. The slow up-building of the system, its utter independence of political schemes,

the paternal philanthropic way in which the able men on the Boards of Managers have for terms of seven years visited, inspected, and personally cared for these homes of the afflicted, and all without thought of payment, approaches very nearly the ideal. The burden to the State has been voluntarily lightened by this system. It cannot be reduced by appointing a corps of one-year-service, powerless-to-act visitors whose services at \$10.00 a day are limited to ten visits in their year of office. Hitherto, though the appropriation has been large, the people have had the satisfaction of knowing that every cent has been used for the care of the insane and not a penny has gone to support a political machine.

Why does Governor Odell wish to abolish the managers? Why does he want to pull down this honest system of which the State is so proud? Why does he want to drag the beneficent charities of the State into the machine? For economy's sake? Fudge! He knows there is no economy in his bill; but there is Power, Political Power! The Local Boards care personally for the petty needs of the insane, providing them with pleasures, comforts, entertainment, conferring with their relatives, and seeing that the helpless and unfortunates get the food and shelter and care that the State generously gives; but these worthy managers, it is true, are not of as much use to the machine as a centralized, closely-organized corps of indifferent paid visitors. And yet we do not impute to our present excellent Governor the desire to organize the machine more closely, for personal power. But we do most emphatically point out to him the danger to which he exposes the State Charities Commission from the influence of an unscrupulous governor.

Also we urge the fact that the bill will not save money; it will not provide efficient service; it will not ensure honest and wise care of the insane.

Moreover, we frankly caution our friends in the legislature that the little amendments and alterations and patches which the Governor may consent to stick on the bill to satisfy this or that objection have nothing to do with the case. The one point is that the Local Boards of Managers *must not be abolished*.

The very fact that the Lunacy Commission is composed of the most distinguished and honorable men is in itself a menace, if their honor is to be used as an argument to cloak the real issue; for it is only to such honorable men that the public would dream of confiding this power. They will not continue to serve, after the system

has degenerated into that state of scandalous mismanagement from which Bellevue has just emerged.

After New York City has had the experience she has suffered under the centralized system of control of commissioners, and after she has finally adopted the trustee system, why should New York State go back and pick up the worn and worthless garment she has shed and wear it under pretense of economy?

#### OSTEOMYELITIS AND ITS DANGERS.

NO BETTER proof of the value of the doctrine of the infectious origin of most acute disease could well be adduced than the present position of our knowledge as to the etiology of osteomyelitis. A mystery to the acute observers of the preceding generation has become one of the triumphs of knowledge in ours. Now there is no difficulty in recognizing osteomyelitis as by no mere analogy, but in reality a furuncle of bone. The micro-organisms that in the hair follicles of the skin give rise to boils are exactly the same as those that within the shaft of a bone cause a purulent focus. Just as with regard to the cutaneous furuncle, the severity of the symptoms are dependent on the virulence of the causative micro-organisms and the resistive vitality of the patients at the moment. So, too, with regard to osteomyelitis. In but one point, but that most important, do the two pathological processes differ; the furuncle, owing to its proximity to the surface, has a marked tendency to spontaneous cure by evacuation, but the osteomyelitic process is unable to find or make an exit, and therefore demands prompt surgical intervention.

The recent discussion on osteomyelitis before the Medical Society of New York County brought out very well the present state of our knowledge with regard to this ailment. It will be found in abstract in our report of the very interesting orthopedic evening of the society in last week's issue of the MEDICAL NEWS.

The two forms in which osteomyelitis occurs are of great importance to the general practitioner. Spread of the suppurative process within the bone may in acute cases soon lead to death and sequestration of the larger part of a long bone, or to still more serious results if general sepsis, or even to sudden death if septic emboli result. Very early recognition, then, is of the greatest importance. In this perhaps more than in any other affection the Röntgen rays are of great assistance for diagnosis. Very early in a



case the outlines of the pus cavity with its lighter interior can be seen. In fact this constitutes the only sure method of early diagnosis. In chronic cases the existence of a limited purulent area in the shaft of a bone gives rise to referred pains in a neighboring joint. These conditions often persist for years with exacerbations of symptoms at irregular intervals and are often diagnosed as recurrent rheumatism.

The seriousness that osteomyelitis may assume is all the more surprising when the slightness of the cause that may occasion it is borne in mind. Any small cutaneous suppurative process, a furuncle, a felon, a slight ulcer, may prove the source of the purulent infection of the bone marrow. This has been demonstrated over and over again by careful bacteriological investigations, for the corresponding pus micro-organisms in pure cultures have been found in the external pus focus as well as in the internal bone lesion. Sometimes the original suppurative process is so slight that it has failed to be noticed by the patient himself and requires very careful thorough inspection for its detection. Not infrequently the causative micro-organisms gain an entrance through some lesion of the mucous membranes.

The frequency of typhoid osteomyelitis is now generally acknowledged. At times the typhoid bacilli seem to have lain dormant in bone marrow for many years (from five to ten) until the immunity of the system to typhoid virus has more or less worn off and then some slight injury to the bone arouses them to serious pathological activity. The original port of entry for the typhoid bacilli was evidently the specific ulcers of the intestinal mucous membranes.

Mouth and throat ulcers are also not infrequent sources of osteomyelitis. Special attention has been called to the fact that many cases of osteomyelitis originate in mouth infection due to unclean dental instruments. Many dentists fail to appreciate the necessity for the most careful cleanliness with regard to instruments used in the mouths of successive patients. Obscure infectious processes that originate in this way often failed to be traced to their true cause. Some of the mild pyemias that masquerade as anomalous rheumatism, neuritis or myositis, are due to dental carelessness. Too much stress cannot be laid on the necessity for dental asepsis or at least faithful antisepsis.

Recent advances in our knowledge of osteomyelitis are of the most practical character and involve especially the prophylaxis of the disease,

its early recognition so as to prevent local extension or generalization, and its prompt effective treatment. The occurrence of osteomyelitic processes in the spinal column is now generally acknowledged. This clears up the mystery of many anomalous cases of so-called Pott's disease that healed rapidly and without deformity. The recognition of chronic cases explains many mysteries of diagnosis. In a word, a chapter of surgery with many points of interest for the general practitioner has received a development that holds out an encouraging prospect for other cognate types of disease that are as yet in obscurity.

#### CHILDREN AND MATCHES.

A STATUTE is apparently needed in this and the other States of the country to assist in decreasing the many cases of manslaughter which arise from the locking-in of young children by their mothers when leaving the house for longer or shorter periods. The case is a peculiar one, but one certainly within the proper jurisdiction of an adequate government and that without any danger of incurring, what to the individualistic Anglo-Saxon is a reproach, the charge of paternalism. One sometimes hears, indeed, of late that the people of the land are "too free," and perhaps this is a case in point.

The mental condition at the bottom of this calamitous and constantly recurring error of allowing one's children to be burned to death, with small chance of succor, seems to be thoughtlessness or, probably less often, ignorance—thoughtlessness and ignorance of the psychologic nature of the child. These are two conditions which it is alike the duty and the privilege of the State through its laws and boards of health to improve, if it would abolish one of the minor horrors of our civilization.

Nothing surely is to young children more interesting and attractive than fire, with its bright and lively flames, while matches inevitably entice by their crackling and brilliancy and are to the child the only available fireworks between Fourth of July. But, even in the family ruled in part by thoughtlessness and ignorance, young children are not commonly given matches to play with nor allowed unwatched to manipulate hot stoves, much less to build fires in the wood-box. These things are so absurd in the well-conducted household that they sound almost humorous to the competent parent, but assuredly such things are of all-too-frequent occurrence when direct and cruelest, because unmerited, tragedy results.

These things, matches and fires, considering their inherent interest for children, are precisely therefore those which children, completely freed from espionage for however short a time, would naturally seek, and, especially in the frequent cases in which due instruction as to the danger has not been inculcated, they would then run riot freely with these everywhere present agencies of an awful death. Moreover, few of the laity realize how little in the way of even superficial burns, especially when accompanied by great emotional shock, suffices to cause the death of a child.

So much for the causes of this common and hapless accident. The effects are only too obvious to every one who reads the news day by day in the papers. While exact statistics are not at hand, it must be obvious that in the course of a single year scores of children in this land are burned to death or wretchedly maimed for life by this one sort of criminal neglect on the part of the mothers and nurses. A statute making adequate punishment possible in the event of accident from this cause would seem to be required, and probably the mere placing of it on the books would call attention as nothing else could to this monstrous but wretchedly frequent effect of maternal thoughtlessness.

## ECHOES AND NEWS.

### NEW YORK.

**Allied Hospitals Board.**—Mayor Low has announced the appointment of the Board of Trustees of the Bellevue and Allied Hospitals, which board was created by the amended charter. Under the law the jurisdiction over Bellevue, Harlem, Gouverneur, Fordham and the Emergency Hospitals is taken away from the Department of Public Charities and lodged in the new board. The following were named and took the oath of office: Howard Townsend, for a term of one year; Theodore E. Tack, for the term of two years; Marcus Stine, for the term of three years; James K. Paulding, for the term of four years; Samuel Sachs, for the term of five years; Myles Tierney, for the term of six years; Dr. John W. Brannan, for the term of seven years. Dr. John W. Brannan was elected president of the Board and James K. Paulding secretary.

**Economy with Cleanliness.**—Commissioner Woodbury of the Street Cleaning Department has announced that he has contracted with the Long Island Railroad for the disposition of the street sweepings without loss to the city. The city undertakes to deliver 2,000 sacks of street refuse every day at certain docks on the East River to the railroad company. It is the purpose of the company to use the sweepings for fertilizing purposes. Under the Tammany administration the sweepings were carried to sea and dumped at a cost of \$95 the scowload of 300 cubic yards. The Commissioner hopes eventually to dispose of the entire bulk, amounting to some 26,000 sacks, upon terms like those already made with the Long Island Railroad Company. The value of the street sweepings for fer-

tilizing purposes was not recognized formerly, but Dr. Woodbury believes that the step he has taken to turn the street garbage into money will ultimately bring a revenue to the city.

**Swift Abattoir Opposed.**—Health Commissioner Ernest J. Lederle has listened for the second time to arguments for and against granting to Swift & Co. a permit to erect an abattoir on First Avenue, from Forty-fourth to Forty-fifth Street. At the first hearing Mr. Swift himself was present to urge that the abattoir which the meat concern proposes to erect would, because of the improvements which have been made in various directions, mechanical and scientific, be absolutely odorless, and therefore not objectionable to persons who live near the spot. But the Health Commissioner's office last week was filled with men and women who live in the locality in which it is proposed to erect the abattoir who submitted strong protests against its erection. The Rev. Dr. David H. Greer said that from 15,000 to 20,000 children lived within the radius which would be affected, and which was at present affected by the stench from the already existing abattoirs. "Their only refuge to get a little fresh air is the street," he said. "It is manifestly unfair to pollute for them the best air they can get—the air of the street." There were many others who said that they lived in the locality in which the abattoirs were located because they could neither sell nor rent their property.

**City's Vaccine and Antitoxin All Right.**—A committee of the Medical Association of the County of New York, which was appointed some time ago to investigate the conditions under which diphtheria antitoxin and vaccine virus were manufactured by the Board of Health of this city, made a report at a meeting in the Academy of Medicine January 20th. Dr. Wm. H. Park, who has charge of the department devoted to the production of diphtheria antitoxin, conducted the Committee through the laboratories and to the stables where the horses and calves are kept. They found that the horses selected for antitoxin production are under nine years of age and perfectly healthy, and are kept in a special building on East Fifty-seventh Street. About two-thirds of the horses had been kept in the basement, and about one-third on the first floor. "In order to prevent criticism, however, all the horses are now kept upstairs." All horses are exercised one hour daily except on very stormy days. The diphtheria toxin used in the injection of horses is produced by a culture obtained by the Department of Health laboratory seven years ago. Before treatment the horses are systematically injected with tetanus antitoxin, so as to prevent the possibility of their contracting tetanus, and since adopting this plan five years ago no horse has developed tetanus. As to vaccine virus, the calves used, the precautions for cleanliness employed, the care given to the stable, and the handling of the virus, have been investigated in detail. In a letter to the Committee Dr. Park says that the change in removing all the horses to the first floor where they will be kept "from now on" was made at their suggestion. The Committee, which comprised Drs. Brill, J. F. Erdmann, F. P. Hammond, and J. J. Nutt, concluded its report by saying that it is "unanimously agreed that the character, professional qualifications, and standing of the men engaged in the supervision and control of the manufacture of these products of the laboratory of the Health Department, none other than skilled help carrying out the details, are more than sufficient guarantee as to the quality of the curative sera and vaccine virus. These men represent the highest professional and scientific skill to be found in



this city in these departments, as is well known to the entire profession. The methods which are used, and which you have had presented, are beyond criticism. In conclusion it is most worthy of remark that the Committee has been unable to find any recorded cases of tetanus in New York following the use of antitoxin or vaccine virus, and that it is their opinion that these products of the laboratory of the Department of Health are absolutely safe."

**Against the Osteopathy Bill.**—A delegation from the New York State Medical Association will appear before the Judiciary Committee of the State Legislature on Wednesday, January 29th, to oppose the Brackett Osteopathic Bill, which proposes to except those of this society now practising from the examination required for a medical license. This subject was discussed by the Medical Association Monday evening and Dr. E. Eliot Harris briefly explained the purpose of the bill and said that it would be opposed on the ground that the Osteopaths' handling of contagious diseases is a positive danger to the community at large; that Osteopathy, so-called, is an agent used in the treatment of disease and as such has no more right or reason to be separated from the general practice of medicine than electricity, mechanical exercise, bathing, nursing, massage, or any other valuable agent or method used in the treatment of disease, and is not entitled to a special examining board.

**Asylum Bill Condemned.**—In response to an emergency call, a meeting of those interested in charitable works was held last week in the assembly room of the United Charities building, to discuss the bill now before the Legislature providing for the abolition of the boards of managers of the State hospitals for the insane. A resolution condemning the proposed legislation as "unwise, inexpedient, and contrary to good public policy" was unanimously adopted. The sense of the meeting was that the proposed plan of vesting the authority hitherto held by the managers in the State Commission of Lunacy and its visiting committees would promote extravagance rather than economy, would eliminate the gratuitous services of competent and sympathetic men and women, and would lead to a dangerous centralization of power, and might expose the hospitals to the unfortunate influences of partisan politics. Ex-Mayor Abram S. Hewitt and Prof. George F. Canfield of the Columbia Law School addressed the meeting. Mr. Hewitt said in part: "The city of New York has rescued itself from the grip of the serpent, and the Governor of the State is attempting to wipe out the work of a century. The Governor, no doubt, means well, but his mind has been crystallized on the subject of cost. His error is to me incomprehensible. I hope the Legislature will pause before it relegates our insane asylums to the barbarism of 200 years ago." Letters from the Rev. A. P. Doyle, of the Paulist Fathers and Morris K. Jesup, approving the fight against the bill, were read.

**Neurological Society Condemns the Asylum Bill.**—At a meeting of the Council of the New York Neurological Society, held Monday last, the Asylum Bill was condemned and resolutions offered to urge its defeat. The clause advocating the abolition of the local managers was deemed especially undesirable.

**Cost of State Charities.**—What will Governor Odell say to the recommendations of the State Board of Charities submitted to the Legislature concerning the appropriations needed for the coming year? It will be remembered that in his annual message Governor Odell suggested that several hundred thousand dollars could be saved in the administration and man-

agement of the fourteen State charitable institutions each year. The Board recommends for the coming year appropriations for maintenance amounting to \$1,197,000, or \$21,000 more than for 1901; and for extraordinary expenses recommends appropriations aggregating \$574,100, or \$24,751 less than for last year. The receipts of these institutions for the fiscal year ending September 30, 1901, including balance on hand at the beginning of the year (\$91,506.71), amounted to \$1,399,669. Their expenditures aggregated \$1,333,361; \$915,043 being for maintenance, \$384,370 for improvements, while \$33,046 was returned to the State Treasurer, pursuant to the provisions of law. The number of their beneficiaries was 7,756. There are ten schools and institutions under private management, but mainly supported by State appropriations, and subject to the State Board's visitation and inspection. The receipts of these institutions for the fiscal year ending September 30, 1901, were from cash on hand, \$43,907; from public sources, \$685,623; from private sources, \$210,784; total receipts, \$940,316. Their expenditures aggregated \$883,483, and the total number of their beneficiaries was 3,306.

**Plans for the State Consumptive Hospital.**—A meeting of the Board of Trustees of the State hospital for the care of persons suffering from incipient tuberculosis was held at Albany Wednesday last, when plans for the hospital buildings, to be erected on the site at Baybrook, between Lake Placid and Saranac, in the Adirondack region were passed on and approved. The Board has been in existence two years, and thus far the only work accomplished is the selection of a site for the hospital. It is understood now that there will be no further delay and that the trustees expect that the hospital buildings will be erected and ready for occupancy by next fall.

**New York State Medical Society.**—The following provisional program is announced: Papers.—Goitre, Medical and Surgical Treatment, by Thomas P. Scully, Rome; Phosphaturia, by James Pedersen, New York; Human Asymmetry, by W. S. Ely, Rochester; Malignant Tumors of the Periphery, Their Pathology and Treatment, by Thomas H. Manley, New York; A Case of Sarcoma of the Tonsil, by Arthur G. Root, Albany; The Treatment of Pelvic Suppuration, by Charles P. Noble, Philadelphia, Pa.; Gonorrhea of the Prostate, by John Van der Poel, New York; The Use and Abuse of Atropine and Other Mydriatics in Determining the Refraction of the Eye, by Frank Van Fleet, New York; Fractures of the Nose, by John O. Roe, Rochester; The Constitutional State versus Catarrhal Deafness, by Sargent F. Snow, Syracuse; The Educational Management of the Neurasthenic, by Edward B. Angell, Rochester; Discoveries in Pathology, by Mary Dixon Jones, New York; A New Method of Bisecting the Uterus in Abdominal Hysterectomy, by C. H. Richardson, Albany; The Traumatism of Pregnancy, by Denslow Lewis, Chicago, Ill.; The Clinical Relations of the Systolic Murmurs Heard at the Pulmonary Area, by Morris Manges, New York; An Epidemic of Typhoid Fever in the Backwoods of Maine, by E. G. Brush, Mt. Vernon; Some Uses of Liquid Air in Pathology, with Demonstrations, by Henry W. Cattell, Philadelphia, Pa.; On a Case of Strangulated Ovary and Tube, by A. T. Bristow, Brooklyn; Toxic Dosage in the Treatment of Some Nervous Diseases, by William C. Kraus, Buffalo; Brachial Neuralgias and Arm Pains, by Charles L. Dana, New York; The Pathology of the Tissue Changes Caused by the Roentgen Rays, by Carl Beck, New York; The Sideroscope, by Thomas R. Pooley, New York; Glioma of the Retina, by Edward L. Peck, New York; On the Position of the

Eyes When at Rest, by Lucien Howe, Buffalo; The Smallpox Problem, by Ernest Wende, Buffalo; The Civilized Indian: His Physical Characteristics and Some of His Diseases, by A. D. Lake, Gowanda; Indian Medicine, by Nelson W. Wilson, Buffalo; *Symposium on Paresis*: (1) Etiology of Paresis, by Arthur W. Hurd, Buffalo; (2) The Early Diagnosis of Paresis, by Francis X. Dercum, Philadelphia, Pa.; (3) Comparative Frequency of Paresis, by Charles W. Wagner, Binghamton; (4) Pathology of Paresis, by Henry J. Berkeley, Baltimore, Md.; (5) Treatment of Paresis; Its Limitations and Expectations, by Edward Cowles, Boston, Mass.; Ringworm; a Note on its Treatment, by George Thomas Jackson, New York; A Case of Epilepsy with Possible Medico-legal Complications, by Frederick Sefton, Auburn; Acute Lymphatic Pseudoleucemia, with Report of Case and Autopsy, by John L. Heffron, Syracuse; The Changes of the Leucocytes in Disease as an Aid to Diagnosis and Prognosis, by Thomas R. Brown, Baltimore, Md.; An Unusual Case of Abscess of the Liver, by Edgar A. Vander Veer, Albany; Gunshot Wounds of the Liver, with Report of a Case, by E. W. Mulligan, Rochester; Concerning the Surgical Treatment of Peritoneal Tuberculosis, by John W. Whitbeck, Rochester; Unusual Hernia, with a Report of Complete Hernia of the Bladder, Complicating a Strangulated Hernia, Requiring Resection of the Bowels, by John B. Harvie, Troy; *President's Address*: The Value to a Physician of Modern Methods of Diagnosis, by Henry L. Elsner, Syracuse; A New Symptom in the Diagnosis of Dystocia, Due to a Short Cord, by Samuel M. Brickner, New York; Pneumonia in Young Children, by W. P. Northrup, New York; A Contribution to the Surgery of the Chest, with a Clinical Report of Illustrative Cases, by Willis G. MacDonald, Albany; Partial Rupture of the Cecum from Obstruction and Distension; Operation; Recovery, by William Edwin Butler, Brooklyn; Tendon Transplantation in the Treatment of Paralytic Deformities, by Arthur W. Elting, Albany; *Symposium on Diseases of the Pancreas*: (1) Physiology and Physiological Chemistry of the Pancreas, by Prof. R. H. Chittenden, New Haven, Conn.; (2) Pathology of Pancreatic Diseases, by George Blumer, Albany; (3) The Diagnosis of Diseases of the Pancreas, by W. S. Thayer, Baltimore, Md.; (4) The Surgery of the Pancreas, by Roswell Park, Buffalo; (5) Clinical Indications for Surgical Interference in Acute Pancreatitis, by Joseph C. Bloodgood, Baltimore, Md.; Pneumogalactocoele of the Breast, by J. Milton Mabbott, New York; A Simple Method for Determining the Percentage of Milk in Home Modifications, by Rowland G. Freeman, New York; Colles' Fracture, by D. W. Houston, Troy; Obesity of Adolescence, by Heinrich Stern, New York; An Unique Case of Double Dacryo-adenitis, by D. H. Wiesner, New York; Puerperal Hemorrhage, by George Seymour, Utica; What Shall Be Done with the Professional Midwife? by M. J. Lewi, New York; The Influence of Certain Diseases of the Nose and Throat on the Middle Ear, by Wendell C. Phillips, New York; A Further Contribution to the Study of Summer Diarrhea among Out-patients, by Charles G. Kerley, New York; Papers by V. G. Gibney, New York, and Charles H. Jewett, Brooklyn, titles to be announced.

#### PHILADELPHIA.

**Medical Club Elects Officers.**—The Medical Club of Philadelphia at its tenth annual meeting, held January 16th, elected the following officers: President, Dr. E. L. Duer (reelected); Vice-Presidents, Drs. Thomas H. Fenton and A. McAllister; Secretary, Dr.

Guy Hinsdale; Treasurer, Dr. F. Savary Pearce. The Club now has 365 members and a sinking fund of \$5,000. It is intended to devote this money to the purchase or erection of a suitable club-house.

**Result of State Examination.**—At the December meeting of the State Examining Board, 105 candidates were examined by the Allopathic Board, 21 of whom failed to pass. Of the 9 examined by the Homeopathic Board, 4 failed to attain the required average.

**Hospital in Need of Assistance.**—St. Timothy's Hospital, Roxborough, has recently been improved to meet the needs of its rapidly-growing work and has incurred a debt of \$11,000. Until this is paid further urgently-needed additions must be postponed. It is the only hospital in a district of about eight miles square.

**Coroner's Work for the Year 1901.**—The work devolving upon Coroner Dugan in 1901 was greater than that of any other one year in the history of the office. Inquests were held in 2,793 cases; in 817 other cases investigated, inquests were thought unnecessary. Among the most important inquests were those on a boiler explosion on a steamboat, causing 24 deaths; the Market Street fire, which cost 22 lives; the Locust Street gasoline explosion with 8 deaths, and the Point Breese oil fire which resulted in the death of 3 firemen. Special juries were impaneled in the above cases and their findings have resulted in the enactment of laws to prevent the repetition of such catastrophes.

**Improvements at the Samaritan Hospital.**—Plans have been made for the enlargement of the Samaritan Hospital to afford facilities for instruction to the classes in medicine at Temple College, the night school of medicine referred to in a previous issue. Two wings are to be added to the hospital, one 40 by 52 feet and the other 40 by 80 feet. In time the present building will be torn down and a wing like the larger one mentioned erected. In all improvements aggregating nearly half a million dollars are planned. The College holds only evening sessions and issues diplomas to its students only after they have passed the State Board of Medical Examiners.

**Pink-eye Epidemic.**—About 3,000 cases of "pink-eye" are reported in this city. Its prevalence is thought to be due to the insanitary condition of the streets because of their torn-up state.

**The Wiener Verein.**—This society, composed of physicians who have studied in Vienna, held its second annual meeting January 11th. Dr. James Tyson was elected president for the ensuing year.

**County Medical Society Favors Vaccination.**—On January 15th, for the first time since the present outbreak of smallpox, the Philadelphia County Medical Society placed itself on record regarding the disease in the following emphatic manner:

"Whereas, Smallpox is continuing to spread among the people of the city; and

Whereas, Sensational newspaper articles minimizing the importance of vaccination have caused a number of people to refuse the vaccination offered by the city physicians; and

Whereas, Of the 977 cases of smallpox admitted to the Municipal Hospital during 1901 there was not a single patient who had been successfully vaccinated within a period of four years, those afflicted being almost exclusively unvaccinated persons or adults unvaccinated since infancy; therefore be it

Resolved by the Philadelphia County Medical Society, representing the physicians of the city and county, That this Society deems it necessary to impress upon the community that universal vaccination is the most effective means of stamping out smallpox.



and that, although fumigation and disinfection are valuable adjuncts, they can by no possibility do away with the necessity for vaccination, since smallpox patients are the most important carriers of infection, and such infection cannot be influenced by the disinfection of smallpox. Be it further

*Resolved*, That publications which slur the importance of vaccination despite the incontrovertible testimony of 100 years are to be deprecated as contrary to the best interests of the community. Such articles are known to have dissuaded people from vaccination who have subsequently died of smallpox."

#### CHICAGO.

**Officers of the Medical Examiners' Association.**—At a meeting of this Association, held January 15th, the following officers were elected: President, Dr. Alfred C. Cotton; Vice-President, Dr. William E. Casselberry; Secretary, Dr. David J. Doherty, and Treasurer, Dr. C. P. Stringfield.

**Chicago Neurological Society.**—At the annual meeting of this Society, which was held January 16th, Dr. Daniel R. Brower was elected President; Dr. H. H. Donaldson, Vice-President; Dr. Charles Howard Lodor, Recording Secretary; Dr. Sydney Kuh, Treasurer, and Dr. Hugh T. Patrick, the retiring President, a member of the Council.

**The Chicago Lying-in Hospital Dispensary.**—This institution reports 2,000 consecutive confinement cases without a maternal death. In 3,763 consecutive labor cases, under the exclusive care of the dispensary, two mothers died, both from spontaneous rupture of the uterus. There were only eight septic fever cases. In two the uterus was cleaned out; in none was any other local treatment instituted. The number of directors has been decreased from 11 to 9.

**Examinations of State Board of Health.**—An unusually large number of candidates for medical certificates of practice took the examinations of the State Board of Health at its quarterly meeting at the Great Northern Hotel, January 16 and 17, 1902. Dr. James A. Egan, Secretary of the Board, presided. There were 49 candidates for physicians' certificates and 24 osteopaths. Four candidates for mid-wife certificates were also present. Dr. George W. Webster, of Chicago, is the President of the Board.

**Officers of the Chicago Ophthalmological and Otolological Society.**—At the annual meeting of this Society, held January 14th, the following officers were elected: President, Dr. Wm. H. Wilder; Vice-President, Dr. C. P. Pinckard; Secretary-Treasurer, Dr. Brown Pusey; Committee on Membership, Dr. Casey A. Wood, Chairman, Dr. C. D. Wescott, and Dr. Lyman Ware. Dr. George F. Suker was elected to membership.

**To Entertain Professor Haab of Zurich.**—A committee, consisting of Drs. Frank Allport, F. C. Hotz, and Casey A. Wood, was appointed to take charge of the entertainment of Professor Haab, who contemplates visiting America this summer and will doubtless read a paper before the Ophthalmological Section of the American Medical Association.

**Membership in Ophthalmological Society.**—In view of the fact that there is a large number of applications for membership in this Society, Dr. H. V. Wurdemann of Milwaukee offered the following amendment: "Hereafter applications for membership in the Chicago Ophthalmological and Otolological Society must be accompanied by a written original thesis upon some eye, ear, nose or throat subject, which is to be submitted to the Membership Committee and ap-

proved, then read and defended by the author in open meeting; the election to be held at the next meeting of the Society." This amendment will come up for adoption or rejection at the next monthly meeting.

**Report of Illinois Factory Commission.**—According to the annual report of the State Factory Commission, the employment of child-labor in Illinois has increased 39 per cent in the last year. In 1900, the inspectors found 14,256 children at work in the factories, and in 1901 the number had grown to 19,839. During that time the increase in manufacture was only 9 per cent., and of women employed 16 per cent.; the gain in the total employed was 12 per cent., or less than a third of the increase in child-labor. The total number of convictions on account of the disobedience of the Child-Labor Law was 725.

**Uniform Laws for Physicians.**—Uniform medical legislation and universal recognition of certificates of State Boards of Health in all States are the objects of the "Reciprocal Federation of State Medical and Examining Boards," which was organized at a meeting held at the Great Northern Hotel, January 17th. Representatives of the States Boards of Illinois, Indiana, Wisconsin, and Michigan were present at the meeting, and communications were received from the State Boards of Ohio and Iowa to the effect that those organizations were in accord and sympathy with the movement. The new organization has long been desired by the medical profession, and it is expected that it will soon become national in character and will be supported by the various Medical Boards in every State in the Union. Another meeting will be held in May in Chicago and every State will be invited to send representatives. The prime object of the Association is to effect a uniformity of rules governing the examination and admission of physicians to practice. Heretofore each State has made its own laws, without regard to the laws of other States, which frequently has resulted in many hardships to members of the profession. A physician desiring to practise in a State other than the one in which he was first examined and granted a certificate would be required to stand the second examination and pay another fee. If he desired during his lifetime to practise in ten States, he would be compelled to submit to ten examinations. Under the reciprocal plan the certificates issued after an examination in one State will be good in the other States belonging to the organization. The examination required by the Federation may be more rigid than those required in many of the States at the present time, but, when once passed and a certificate issued on them, it will admit the holder to practice in all the other States. It is said that the plan was first proposed by Dr. Emil Amberg of Detroit, Mich., and set forth in the *MEDICAL NEWS*, and has been a subject of discussion in medical societies and in various State Boards for years. It is only recently that active steps were taken to form such an organization.

**Officers of the Reciprocal Federation of State Medical and Examining Boards.**—President, Dr. J. R. Currens of Two Rivers, Wis.; Vice-President, Dr. James M. Dinnen, of Fort Wayne, Ind.; Treasurer, Dr. Wm. A. Spurgeon, of Muncie, Ind.; Secretary, Dr. B. D. Harrison, of Sault St. Marie, Mich.

**Modern Dietetic Preparations.**—Dr. Arnold C. Klebs, in a paper on this subject, read before the Chicago Society of Internal Medicine, directed attention to the great progress made in this line and especially in the manufacture of nutrient preparations. In this country the progress in the manufacture has not kept pace with the advances of physiological chemistry and most of the preparations are of foreign make. Many

of the preparations are furnished at a relatively high cost and astonishingly small food value, and frequently have only a *raison d'être* on account of their stimulating qualities produced by a higher percentage of extractive substances and salts or by the addition of alcohol. The dietetic value of a good preparation is determined chiefly by its actual food value, determined by the amount of assimilable albumin it contains. The price of such albumin should not be higher than that contained in ordinary foodstuffs. The advances already made have opened possibilities to reduce the price even below this. Possible objections against the prolonged administration of such preparations should be overcome (1) by their having a pleasant taste or none at all; (2) by their small bulk, so that they can be given without overloading the digestive tract; (3) by their not being irritative to the digestive organs, even after prolonged use; (4) by their ready utilization in the metabolism, which can only be determined by experiment; (5) by their low price. These desiderata were fulfilled by a number of preparations now on the market. The author reports several analyses of the better known preparations. As nutrient additions to the diet, the pure albumin preparations, tropon, plasmon, soston, etc., with from 75 to 90 per cent. of assimilable albumin, have proved of the greatest value. The albumoses (sوماتose) can not be administered in doses sufficient to maintain the nitrogen equilibrium, but in small doses have nutrient value and are powerful digestive stimulants. The peptones, on account of their bitter and unpleasant taste and their irritating properties to the digestive organs, can practically be abandoned. The value of the larger number of other predigested foods is also, to say the least, doubtful. Meat extracts and liquid beef preparations can be used as valuable appetizing additions to the diet. The various carbohydrate and fat preparations, as well as the different combinations, were enumerated.

**Pneumococcic Arthritis.**—Dr. James B. Herrick read an abstract of a paper on this subject. He referred to the rarity of this condition, which occurs most frequently as a complication of acute croupous pneumonia. Cave, who reported a case in January, 1901, was able to find only thirty-one cases recorded in the literature. To this number Dr. Herrick adds seven, three of them being cases that had come under his own observation. These cases tended to confirm what had been previously observed by Leroux and others, *i. e.*, that the condition is most frequently met with in the larger joints; that it rarely occurs except as a complication of pneumonia, and that it is most likely to appear late in the disease or during convalescence. The influence of trauma was shown by the records of two cases. The prognosis is in general bad, because the condition occurs in those who are already ill of a serious disease, and because there is in these cases a pneumococcic septicemia, frequently with other localization in structures more vital than the joint. Death in many of these instances is due, not to the involvement of the joint, but to a coexisting empyema, endocarditis, pericarditis, or meningitis. The treatment that must be employed is as a rule surgical, yet some cases, particularly those in which the fluid in the joint was not purulent, make good recoveries under simple aspiration. Two such cases were reported by Dr. Herrick; in one of them, in which there had been an involvement of the elbow joint, the fluid withdrawn by aspiration was distinctly purulent. A recovery had followed in both instances.

**Heart Failure and the Acute Infectious Fevers.**—The author of this paper, Dr. N. S. Davis, Sr., had seen several cases of severe pneumonia, typhoid fever and

diphtheria, in which the patients had been for several days taking from ten to sixteen ounces of whisky or brandy every twenty-four hours, with three hypodermic injections of strychnine, and liberal doses of digitalis, all for the sole purpose of strengthening the heart, and without the slightest reference to the special pathological conditions in each case causing the heart to be weak. He is satisfied that nearly all the cases of serious cardiac weakness or heart failure met with in practice are caused either by deficient oxygenation and decarbonization of the blood, by impairment of the action of the cardiac and vasomotor nerves, or by direct degenerative changes in the muscular structure of the heart itself. The most rational and important indications for treatment in established cases of pneumonia, diphtheria, typhoid and other infectious fevers are to aid Nature's own processes by securing for patients abundance of fresh pure air, strict cleanliness, free sponge bathing, pure water to drink, and the use of such diaphoretic, diuretic, and alterative medicines as will prompt, at least, natural activity in all the excretory structures of the body. It is equally important to avoid the giving of all such antipyretics and so-called cardiac stimulants as are known to diminish hemoglobin and free oxygen in the blood and to lessen both tissue metabolism and excretion. By their anesthetic and analgesic effects, they allay pain, quiet restlessness, lessen the pyrexia temporarily, but they directly favor the retention of the toxic agents in the blood until an unexpected fatal collapse ensues which is attributed to heart-failure. Although he has practiced medicine many years, he has never seen a case of fatal heart-failure while that organ was supplied with well oxygenated arterial blood, while the metabolic and excretory functions were fairly active. But he had known many cases of both acute and chronic disease in which death resulted directly from both respiratory and cardiac paralysis, preceded by deficient internal distribution of oxygen and lessened activity of both tissue metabolism and excretion, while they were under the persistent influence of anesthetic and narcotic drugs.

**Posterior Urethral Reinfection from the Bladder.**—Dr. Louis E. Schmidt read a paper on this subject before the Chicago Medical Society. It is not unusual to observe acute relapses in the course of chronic urethral diseases. Harrison was the first to direct attention to recurrences of urethral reinfection after the healing of the posterior urethral inflammation from areas of the bladder which still continued to be affected. Harrison does not cite specific cases, but mentions the subject in a general way. For this reason it has appeared desirable to state the facts in closely-observed cases. Wertheimer and Kolischer have described cases of this kind in the female. Neither dilatation, massage of the posterior urethra and adnexa, irritating instillations, the drinking of beer or champagne, nor the sexual act will cause a relapse in these cases under consideration. These mechanical and chemical irritants would probably in most cases cause a relapse if the process were in the posterior urethra. Urethroscopy shows normal conditions except possibly more or less chronic changes. But, if these patients subject themselves to pernicious irritants which partly affect the bladder, a recurrence of the posterior urethral inflammation appears in a short time and a typical posterior gonorrhea results. Thus, reinfection occurring from the bladder can be proved with a certainty. The course is usually as follows: After the acquisition of a "cold," after the partaking of irritating foods or even after chronic constipation, cardinal symptoms of cystitis make their appearance. The patients who



never have had or possibly only have had slight symptoms referable to the bladder are taken suddenly ill. Frequently a chill is the premonitory symptom and often a fever continues. Then, in the course of two or three days a urethral discharge, which is usually never copious, makes its appearance, varying somewhat in color and consistency with the presence of the gonococcus. With all this the typical signs and symptoms of a posterior urethritis become apparent. If under rational treatment the posterior urethral inflammation is allayed and the acute bladder symptoms are made to disappear, there is apparently no involvement of the bladder; yet, when the bladder is again subjected to the agents already mentioned, the same course of events may recur. A more careful examination of these cases reveals the following conditions: The trigonum is the seat of a chronic inflammation; the characteristics luster is lost; the vessels are apparently obliterated; the mucous membrane appears like dark red velvet, and within the area, here and there, are distributed brownish-red spots of varying size. The posterior border of the internal urethral orifice is swollen; the epithelial cells edematous, and these sway more or less like a net in the fluid which fills the bladder. The practical deductions from these observations are that every case of apparently-cured chronic posterior urethritis, if doubt exists, should be cystoscoped in order to recognize any latent bladder disease, and, if such be present, it should be treated accordingly. Old and circumscribed cases of trigonum cystitis always require energetic treatment. If it is not possible to attain the desired object with instillations, the entire granulating surface of the trigonum can be thoroughly curetted in order to obtain a permanent cure. This procedure is readily done under local anesthesia with a Kolischer cystoscope.

#### CANADA.

**Gift to Science.**—Mr. E. S. Bronson, a prominent citizen of Ottawa, Ont., has donated a large sum of money to the McGill Medical Faculty for researches in the possible methods for the cure of consumption. Dr. A. G. Nichol will conduct the work under the supervision of Professor Adami.

**Lecture by Sir James Grant.**—"How to Live to Prolong Life" was the subject of a lecture delivered one evening last week in Toronto by Sir James Grant, Ottawa, who has been physician to Canada's Governors-General since the time of Lord Monck. The lecture was in aid of the Women's Residence of Victoria University, and during its deliverance Sir James took occasion to advocate the medical inspection of schools and his opposition to a prohibitory liquor law for Ontario.

**New Civic Hospital for Montreal.**—At a recent meeting of the Hygienic Committee of Montreal, Dr. Laberge, the Medical Officer of Health, presented an important report upon the great necessity for a new Civic Hospital for that city. The present hospital has been used for the recent outbreak of smallpox, and the city is now without a regular hospital for patients suffering from diphtheria or other contagious diseases.

**Amalgamation of Medical College and Hospital.**—The Governors of the Western Hospital, Montreal, and the Governors of the Medical Faculty of Bishop's College University, respectively, have come to a definite understanding that it will be in the interests of both institutions if an amalgamation be effected. Owing to the increased prosperity of the Western Hospital, a new building has long been desired, and under the

present arrangements this will be carried out at once and the Medical Faculty of Bishop's will take possession of the old hospital building when the new hospital is completed. This is expected to be about the beginning of the autumn session of 1903.

**Vaccination Items.**—"The Saints," a local sect near St. Catherine's, Ont., are causing trouble for the health authorities in that district. An outbreak of smallpox has occurred among them, but they all refuse on any terms to be vaccinated. They have, therefore, been quarantined *en masse*. Dr. Bryce has been consulted in the matter and has advised that the employment of force will be quite justified, and it will be a case of get vaccinated or go to jail.—The number of people vaccinated in Montreal since last October up to the present time totals 19,000.

**Personals.**—Dr. Phillips Weatherbe of Wolfville, N. S., has been appointed as supernumerary to the Canadian Field Hospital for South Africa.—Drs. Leslie and Jennie Dow of Toronto return for the China Mission Field on January 27th.—Principal Petersen, Dean Roddick of the Medical Faculty and Dr. Rutan will represent McGill University at the annual dinner of the New England Society of McGill graduates to be held at Boston on January 23d.—Dr. E. P. Lachapelle is a candidate for mayoralty honors at the coming municipal elections of Montreal.—Dr. A. G. Macdougall, house surgeon of the General Hospital, Toronto, has been appointed civil medical attaché to the regiment in charge of the Boer prisoners at Hamilton, Bermuda.—Dr. Telesphore Parizeau has returned from abroad and has been appointed professor of pathological anatomy at Laval University, Quebec.—Dr. O. Bjornson of Winnipeg and Dr. B. J. Bjornson of North Dakota left Winnipeg January 9th for a year in European hospitals; both are graduates of the Manitoba Medical College and were formerly house surgeons at the Winnipeg General Hospital.—Dr. Gordon Bell, provincial bacteriologist of Manitoba, and Dr. Holmes Simpson, secretary of the Board of Health, left Winnipeg January 13th for St. Paul, where they will attend a convention of medical men for the purpose of discussing the smallpox outbreak in districts between St. Paul and Winnipeg.—Dr. Macdonald, superintendent of the hospital at Dawson City, is paying a visit to Montreal; he states that there has been comparatively little sickness in the Yukon this year.—Dr. W. H. Groves, a graduate of Toronto University, has been appointed surgeon of the R. M. S. "Sekondi," flagship of the African Steamship Company, plying between Liverpool and the West coast of Africa.—The Hon. Dr. W. H. Montague has returned to Canada after having spent a year in New Zealand, Australia, in the interests of the Independent Order of Foresters.—Dr. N. A. Powell, President of the Ontario Medical Association, entertained Dr. W. H. Drummond of Montreal, the author of "L'Habitant" and "Johnny Corbeau" on the evening of January 17th while the latter was in Toronto to deliver the first Toronto University Saturday afternoon lecture of the present season. A large number of the medical fraternity spent a most enjoyable evening with both gentlemen.

**Indian Vital Statistics.**—The aggregate increase of the total Indian population for the whole of Canada is 517 over last year, the population in 1901 being 99,327. There were 2,479 births during 1901 and 2,240 deaths. In 1900 there were 2,333 births and 2,567 deaths. Female child-marriage is still to some extent practised among the Blackfoot, Piegans and Bloods, and in order to put it down entirely prohibition of the custom may eventually have to be resorted to.

## GENERAL.

**Centenarians in Germany.**—Insurance tables show that in Germany only one person in 10,000 reaches the age of 100 years.

**VI. French Medical Congress.**—This Congress will be held at Toulouse during the Easter holidays. Prof. Lemoine will preside.

**No Smallpox in Hackensack.**—It has been stated that, notwithstanding the reports concerning an outbreak of smallpox which were noted in the *MEDICAL NEWS* of January 11th, there is not a case of smallpox in Hackensack, N. J., nor has there been any for the past two years.

**To Found a Sanatorium in Colorado Springs.**—Gen. William J. Palmer has donated 100 acres and \$50,000 to found a sanatorium in Colorado Springs. As already planned, two buildings will cost \$200,000 and \$50,000 respectively. The first will accommodate 100 patients who are able to pay a fair price for treatment. The class who can pay little or nothing will be accommodated in the other building to the number of fifty. Revenue from the large building will mainly support the smaller one. The sanatorium will be conducted on the German theory. The sanatorium will be east of the city, to procure the purest air and freedom from dust and smoke. The medical staff and the board of trustees are yet to be selected. A company will be incorporated. A large part of the money has already been subscribed.

**Labrador Medical Mission.**—Along more than a thousand miles of seacoast in Newfoundland and Labrador there are no doctors except those of the Labrador Medical Mission. Yet medical service is greatly needed. The resident and summer population of these coasts reaches from twenty to forty thousand. Life is a hard struggle for them and disease is frequent. They are largely subject to accidents, poisoned wounds, eye-disease, digestive troubles, scurvy, consumption, and various epidemic diseases. Their only possible relief from these conditions and from the terrible suffering, crippling, death and destitution resulting from them comes from the work of the Mission. This Mission deals with over 2,000 cases every year. It maintains a finely-equipped hospital steamer and two hospitals on the Labrador shore and is building a third hospital in Northern Newfoundland.

**Journal of Obstetrics and Gynecology of the British Empire.**—This new journal, noted in our "London Letter" of some time past, is just to hand and editors and publishers alike deserve credit for its excellent appearance. It is a large octavo of 128 pages, handsomely printed and well bound. An analysis of its contents will shortly be given in the "Medical Progress" columns of the *MEDICAL NEWS*.

**Dr. Rixey to Succeed Van Reyepen.**—The expected application of Rear Admiral William K. Van Reyepen, Surgeon-General of the Navy, for retirement after forty years' active service, was made to the Secretary of the Navy January 15th. Admiral Van Reyepen will be succeeded by Medical Inspector Presley M. Rixey, U.S.N., who was attending physician to the McKinley family and is now occupying a similar position with the Roosevelts.

**Obligatory Hospital Service.**—A year's service in a hospital has been made obligatory to the medical graduate in Budapest; four months are to be given to the medical wards, two to the surgical and two to the gynecological; the remaining four months are to be passed in any department selected by the interne.

**Obituary.**—The death of Hugo von Ziemssen, in Munich, January 21st, removed one of the greatest

medical and scientific men of the age. He was born in Greifswald December 13, 1829, and during the epoch-making latter half of the nineteenth century was one of the leaders of scientific thought. With the praise that is given to such men as Pasteur, Koch, Virchow, and others who have opened the avenues of pure science and revolutionized theories, we sometimes forget that their discoveries must be made practical in the hospitals and clinics before they receive their valuation stamp and will pass as scientific currency. Ziemssen was a master clinician and a great physician. The scientific institute for clinical instruction which he established at Munich has served as a model for all lands. His practical experiments in applying the discoveries of the age to the practice of medicine have appeared in authoritative treatises on the cold-water treatment of typhoid fever, the treatment of pneumonia, tumors of the stomach, and on a vast number of other subjects, among which the use of electricity in medicine is important. He is best known to physicians the world over by his enormous seventeen-volume work, "Handbuch der speciellen Pathologie und Therapie," popularly known in America as "Ziemssen's Encyclopedia," which he wrote in collaboration with other eminent specialists. He was also for thirty-seven years the coeditor with Zenker of the *Deutsche Archiv für klinische Medicin*. Probably no one man did more in the last half century to deserve the name of "Great Physician" than Ziemssen through his writing and his medical work.

Dr. William Mervin Smith, who for twelve years was Health Officer of the Port of New York, died in Redlands, Cal., Friday, January 17th, in his seventy-sixth year. He had an active career in politics, being twice elected to the Legislature and several times a delegate to national conventions, notably to that at which Lincoln was nominated. He was also Surgeon-General on Governor Dix's staff, and in the Civil War was Surgeon of the Third Brigade. He lived in Brooklyn for many years after his retirement from office.

Dr. Torrance Sparham of Brockville, Ont., the oldest practitioner in that town, died suddenly January 11th at the age of eighty-nine years. Dr. Sparham was graduated from McGill University and had resided in Brockville for forty years. He was of an inventive turn of mind and had patented artificial limbs which are said to be still largely in use.

Dr. Charles L. Bonnell, a prominent physician and surgeon, died recently at his home, No. 3 Hanson Place, Brooklyn. He was born in Dublin in 1848 and was graduated from Wesleyan College in 1868. After two years at the College of Physicians and Surgeons, in New York City, he received the degree of M.D. from the Hahnemann Medical College in Philadelphia. He was resident surgeon and lecturer at the Brooklyn Homeopathic Hospital and was chief of staff for six years. He was also a member of the staff and lecturer at the Brooklyn Mechanical Hospital and consulting surgeon at the Memorial Hospital for Women and Children. He was a member of the New York State Homeopathic Medical Society and of the Kings County Homeopathic Medical Society.

Dr. J. T. Eakridge, neurologist and alienist, died of tuberculosis in Denver January 16th at the age of fifty-four years. Because of pulmonary tuberculosis, Dr. Eakridge went to Colorado in the early eighties and soon after arriving there devoted himself entirely to the specialty in which he became distinguished. He was a Fellow of the American Neurological Association and was neurologist to various hospitals in Denver.

Dr. Clayton Parkhill, well known as a surgeon and



a writer, died in Denver January 16th at the age of forty-one years. Dr. Parkhill was a fellow of the American Surgical Association, a member of the American Medical Association and of various State and local societies. He had practised surgery in Denver continuously for fifteen years and enjoyed a wide reputation and an excellent practise.

**Resolutions Concerning Death of Dr. Parkhill.**—The following resolutions were adopted by the Medical Board of St. Luke's Hospital, Denver, on the death of Dr. Clayton Parkhill: "The medical and surgical staff of St. Luke's hospital is called upon to mourn the death of one of its most prominent members.

"Dr. Clayton Parkhill was appointed attending surgeon to the hospital in 1887 and served continuously in that capacity until his death. As a surgeon he was painstaking, intelligent and careful, successful in his work, kind and gentle in the treatment of his patients. As a man, he was courteous and amiable; as a colleague he was companionable and helpful.

"Dr. Parkhill was one of the most brilliant of operators and the profession is indebted to him for many useful and practical surgical inventions. His counsel was eagerly sought by students and practitioners. As a writer he was clear and forcible; as a lecturer he was eloquent and thorough. He was in truth among the distinguished of American surgeons and did much to shed luster on his chosen profession. At the breaking out of the Spanish-American war he was among the first to respond to the call of duty and as a military surgeon he deservedly held high rank.

"The staff of this hospital desires to record its appreciation of his long and valuable services to the institution and of his many endearing personal qualities; and it extends to his bereaved family and friends its profound sympathy."

Dr. Kingston Goddard, coroner of Philadelphia from 1874 to 1877, died of Bright's disease on January 19th.

## CORRESPONDENCE.

### OUR LONDON LETTER.

(From Our Special Correspondent.)

LONDON, January 11, 1902.

**A CANCER CRUSADE—THE SINEWS OF WAR NEEDED—CANCER RESEARCH IN ENGLAND—THE PROFESSION OF SCOTLAND AND THE GENERAL MEDICAL COUNCIL—VIOLET LEAVES IN CANCER: SEQUEL OF THE CASE OF "CURE"—THE MEDICAL PROFESSION OF GREAT BRITAIN AND TESTOTALISM.**

THE munificent donation for the purposes of the crusade against consumption mentioned in my last letter has aroused a hope that a benefactor may come forward to help in the fight against cancer. One or two efforts have been made within the last few years to organize a league against that fell disease, the ravages of which seem to become more extensive every year, but initiated by obscure, though doubtless well-meaning men, they have flickered out almost at once. It is stated in some of the daily papers that "a scheme is ready to hand, framed under the joint auspices of the Royal Colleges of Physicians and Surgeons, for the conduct of the continuous investigation that is necessary; but for this purpose at least £100,000 is required." I have no doubt that \$500,000 would be of considerable use in such a research, though it is quite possible that much more would be required, for Nature does not sell her secrets for gold. But it is not the fact that a scheme of any kind has been framed by the Colleges. The matter is, I believe, under consideration by the authorities of the two Colleges, but no definite agreement has been arrived at. Systematic researches on the pathology of cancer have for some time past been carried

on in a laboratory attached to the Middlesex Hospital, which has had a special cancer ward since 1792. Two years ago a wing intended exclusively for female sufferers from cancer was opened. This wing has accommodation for forty cases, while a ward in the main building, with nine beds, is reserved for male patients. They are kept in the hospital till they are cured or till they find surcease of suffering in death. There is thus a large amount of material for the study of cancer in all its aspects, and much may be hoped from the work of Mr. A. G. R. Foulerton, the director of research, and his assistants. But they are hampered by want of sufficient funds. At the Cancer Hospital there has been in existence for many years a pathological department in which experimental research has been carried on. Here, too, the workers are crippled by want of adequate means, and an appeal has been made to the charitable public for help. The governing body of the hospital has now under consideration a scheme for greatly enlarging their laboratories with the view of making the work of investigation more extensive and more thorough. The public which takes its tone, as far as it can, from the King, will probably subscribe with fair liberality, for His Majesty delivered himself not long ago of an opinion that the investigation of cancer was a matter of urgent importance. The antivivisectionists, however, who would apparently prefer that the human race should be decimated by cancer than that a mouse should feel the prick of the inoculation-needle, are doing their best to divert subscriptions from hospitals which have research laboratories connected with them. They would doubtless have denounced the provision for research that is to be a feature of the King's sanatorium, but that they know they would damage their cause in the eyes of the British public by associating it with even the appearance of disloyalty. In this way our worship of royal idols sometimes works for good.

Reference has been made in previous letters to the profound indifference with which the medical profession in this country regards the question of medical reform. At the recent election of direct representatives on the General Medical Council more than half the profession in England did not vote. In Scotland, where, according to the testimony of Professor Clifford Allbutt and other English authorities, the intellectual standard of the average practitioner is higher than it is in England, considerably more than a third abstained from voting. The fact is that the frame of mind of the bulk of the profession in regard to reform is that of Gallo, who "cared for none of these things." A good illustration of their attitude toward our Medical Senate was afforded by a member of the profession, who, when urged to vote, asked, "What is the General Medical Council? Who are its members? Where does it meet? What does it do? What interest is it to me?" The hopeless apathy revealed by such questions is the greatest obstacle in the way of reform. But it is the reformers themselves who are in large measure responsible for the indifference which they are now at last beginning to recognize, for their foolish and impracticable proposals, their unstatesmanlike methods, and their violent language, have made most people look upon them as intolerable bores.

Some time ago I related for the edification of your readers the strange eventful history of an old lady who had got rid of a malignant tumor in the throat and neck, apparently as the result of the application of an infusion of violet leaves. I note that a contemporary which supplies sweetness and light to the medical profession of the City of Brotherly Love speaks of the story as a "fake." That it looks like a "fake" may be admitted; but, whatever explanation of the sequence of events may ultimately be forthcoming, it certainly is not a

"fake." The old lady is still quite well. There is a deep cavity in her throat where the tumor was, but no ulceration; on the outside of the neck there is nothing abnormal to be seen. Sections of the growth, which was pronounced by the Clinical Research Association and various histological experts to be of epitheliomatous character, have since been submitted to our highest authority on such matters. His judgment, given without any knowledge of the clinical history, was that, though not epitheliomatous, it was certainly malignant. After learning the facts of the case, however, his opinion seems to have become considerably less definite. Evidently, we have still a great deal to learn about cancer and malignant disease generally. It would further progress if the profession were to adopt a less Nihilistic attitude in regard to the disease, and especially if it were to keep what Gladstone called an "open mind" on the subject and not refuse to consider reports of cure simply because they are improbable. The issue of the case which has made such a sensation (deeply deplored, it is said, by the patient herself) is awaited with great interest.

Prominent members of the medical profession in this country have on several occasions made proclamations *urbi et orbi* on the subject of alcohol. The first which was drawn up by Mr. Julius Jeffreys, a Fellow of the Royal Society, in 1839, was signed by most of the leaders of the profession of that time, including Sir Benjamin Brodie, Sir James Clark, the trusted physician of Queen Victoria in the early days of her reign, Marshall Hall, Robert Lee, Partridge the anatomist, Richard Quain (not Sir Richard), President of the Royal College of Surgeons, Benjamin Travers and many others. The utterance is described as an outspoken declaration in favor of total abstinence. A second declaration to the same effect was made in 1847; it was signed by over 2,000 practitioners, among them being such men as Addison, Bright, Brodie, W. B. Carpenter, Copland (of the "Dictionary"), Henry Holland, Paris (author of *Pharmacologia*), Pereira, Prout, Forbes Winslow and others of light and leading, to use a phrase of Edmund Burke's appropriated by Lord Beaconsfield. A third manifesto issued some years later and signed by three hundred consulting physicians and surgeons was not so much a condemnation of alcohol as a protest against its therapeutic abuse, which was the result of the teaching of Anthony Todd Thomson and his disciples. The practice of total abstinence has now become considerably extended among members of the medical profession in Great Britain. It is estimated that there are in this country at least a thousand practitioners who not only preach abstinence, but practise what they preach. There is a British Medical Temperance Association which feels itself strong enough to make the propaganda of which it is the organ more aggressive in character. Acting in conjunction with the American Medical Temperance Association and the corresponding association in Germany it has decided to issue an international manifesto, declaring that "seeing that the common use of alcoholic beverages is always and everywhere followed, sooner or later, by moral, physical and social results of a most serious and threatening character, and that it is the cause, direct or indirect, of a very large proportion of the poverty, suffering, vice, crime, lunacy, disease and death, not only in the case of those who take such beverages, but in the case of others who are unavoidably associated with them, we feel warranted, nay, compelled to urge the general adoption of total abstinence from all intoxicating liquors as beverages, as the surest, simplest and quickest method of removing the evils which necessarily result from their use." The document is to be signed by doctors who are total abstainers.

## TRANSACTIONS OF FOREIGN SOCIETIES.

### ITALY.

#### SMALLPOX AND VACCINATION.

J. MACCOMBE at the Hunterian Society, November 13, 1901, read a paper upon the differential diagnosis of smallpox which embodied also a communication upon the subject of vaccination. He says that he disregards the ethical aspect of vaccination and bases his observations solely upon smallpox hospital statistics and his own hospital experience. The hospital case-mortality in unvaccinated smallpox patients is from forty-five to fifty per cent., in vaccinated patients about eight per cent. The severity of an attack of smallpox in vaccinated subjects bears relationship to the efficacy of the vaccination. The basis of the smallpox statistics in London is the number and quality of the vaccination scars. Viewed in this light nearly twelve thousand cases of smallpox in vaccinated subjects show the following results: One good scar, 6.4 per cent.; two or three good scars, 3.7 per cent.; four or more good scars, 2.7 per cent.; one poor scar, 16.7 per cent.; two poor scars, 11.2 per cent.; three poor scars, 7.4 per cent.; four or more poor scars, 4.8 per cent. The case-mortality is therefore inversely proportioned to the number of deep scars; the range is as just stated. When he was treating the disease in the South Eastern Hospital he obtained statistics based on the actual area of vaccination surface and with regard to foveation. He measured the area of vaccination scars in 5,808 consecutive cases. At that time the Local Government Board standard for effective vaccination was not less than one-third of a square inch of foveated scar. He followed this standard and regarded as imperfectly vaccinated all those who showed an imperfectly foveated surface no matter how large the area. His results are as follows: Effective vaccination, 1,435; deaths 36, rate 2.5; ineffective, 4,373 cases; deaths, 373, rate 8.7. These figures appear to show the great advantage of extent of vaccinated surface and of degree of scarring in lessening the fatality of smallpox. While in charge of a large smallpox hospital, the protection afforded to officers, nurses and servants by vaccination and revaccination was remarkable. A very large number were employed, but only two contracted smallpox, one being a nurse and the other a ward-maid. The nurse was a determined anti-vaccinationist and during the pressure of work she somehow escaped vaccination and suffered a mild attack of unmodified smallpox. The servant had been revaccinated three times unsuccessfully and had a very mild attack of modified smallpox. It seems likely that if it were not for the protection afforded by vaccination and revaccination against smallpox, it would be impossible to obtain nurses and other employees in our smallpox hospitals. Smallpox does occur in a very few people who show good scars of successful revaccination. None of his staff who had been revaccinated ever contracted the disease, but he has had a patient who showed the scars of successful revaccination and still contracted the disease. This has been the fact, although they showed well foveated primary and secondary and repeated vaccination scars. It must be remembered, however, that in some individuals even an attack of smallpox itself does not protect against a second attack of the disease.

MAJOR GAINSWOOD followed with a paper on the present aspect of smallpox and vaccination, making especial allusion to Dr. Creighton's article in the "Encyclopædia Britannica." Three indictments may be made against this author: (1) The facts reported by no means necessarily support the deductions; (2) facts seemingly against vaccination are enlarged and facts favoring vaccination are briefly dismissed; (3) facts



standing on vastly different basis are treated as of equal value. Dr. Greenwood then showed the looseness of evidence upon which Creighton founded his conclusions, especially that certain diseases, including jaundice, are caused by vaccination. Syphilis, he appeared to believe, was originated *de novo* from vaccination. The decrease in smallpox he attributed to a change in the type of the disease. But this cause, if it existed, would scarcely explain the great diminution of it among children as compared with that among the general population. Decrease in the death-rate, Creighton says, has not occurred, as at the end of the eighteenth century it was also 18 per cent. Greenwood urged that statistics on mortality in the old epidemics are entirely untrustworthy. The Conscience Clause had caused the law to be treated with contempt and practically repealed the vaccination laws. Experience gained since passing the last Vaccination Act taught the following lessons: (1) The uselessness of throwing a sop to the antivaccinationist, war to the knife against vaccination in any form being his intention. (2) The administration of vaccination laws should not be intrusted to Boards of Guardians, but to Borough Councils, better to Health Departments, and best of all to some central authority not influenced by any local prejudices. (3) Freedom of the vaccination officer from control by any local authority, but subjection of him to the local Government Board or the central vaccination authority whose inspectors should report periodically how his instructions are being carried out. (4) Vaccination as now practised affords a protective inoculation against smallpox as powerful and trustworthy as that introduced by Lady Montague, without its dangers to the patient and without the risk of spreading the disease. (5) The efficient vaccination is shown by a scar not less than one-half inch square. Revaccination in adult life is always necessary, usually at intervals of not less than ten years. The so-called one spot vaccination is greatly to be condemned. (6) The efficiently-vaccinated patient rarely contracts smallpox, no matter how much he may be exposed. (7) Vaccination under suitable antiseptic precautions and with proper lymph has hardly any dangers of introducing other diseases. (8) No general sanitary measures can possibly take the place of vaccination as a protective against smallpox. (9) Compulsory vaccination especially among infants is highly desirable. It is the duty of the medical profession to lose no opportunity of impressing this fact upon the public and the law-makers.

W. A. BOND, Medical Officer of Health at Holburn, submitted a communication upon vaccination. The general experience among the nurses and the staff of the smallpox hospital was that they could expose themselves with almost complete impunity to smallpox provided they were efficiently revaccinated. In the Metropolis Asylums Board Hospitals no cases of smallpox had occurred during the past seven years, 1894 to 1900, inclusive. For ten years there have been no cases except in persons attacked before revaccination had been successful. During the thirty-five years preceding 1871 no case of smallpox was reported among the nurses and servants of the Highgate Smallpox Hospital. Since then the only case was that of a gardener who had not been revaccinated, making a total of sixty years with this case as the sole exception to absolutely complete immunity from smallpox. Other smallpox hospitals show similar results. Death from smallpox among the vaccinated is much less than among the unvaccinated. In London from 1891 to 1900, inclusive, the death-rate was 3.1 per cent. and in the unvaccinated 18.1 per cent. If all doubtful cases without evidence of vaccination and among whom the

majority had probably never been vaccinated successfully were counted in the former series the death-rate would be only 4.8. In Leicester 198 vaccinated persons of all ages were attacked. Only one death occurred, that of the hospital laundress, age forty-five years, intemperate and not revaccinated since infancy. Of 154 unvaccinated patients 19 died, a rate of 12.3 per cent. Under the age of ten years the protection afforded by perfect vaccination is still very much greater. The statistics included patients who showed good, bad and indifferent vaccination scars and some in whom vaccination had never been done. The records also give evidence of the fact that the attack-rate was smaller among the vaccinated than among the unvaccinated and the type of the disease was much less severe among the vaccinated. Marson has given a record of 14,000 cases among whom those having four or more deep vaccination scars were much better protected than those who had less. Other observers have proved that large, deep scars always give better protection. Revaccination Dr. Bond discussed in concluding in the following light: In the London post-office from 1870 to 1880, inclusive, and embracing the epidemic of 1871, only ten slight cases occurred without a death. In Sheffield and Warrington in the post-office and police force there was not one attack among the revaccinated. Since 1874, when revaccination became compulsory throughout Germany, there have been very few deaths from smallpox. In the German Army not one death has occurred from smallpox.

A visitor said that he was much astonished that so many people in England should be glad to hear a discussion on smallpox and vaccination, because in Germany smallpox does not trouble the community at all. Practically speaking it had been wiped out. By taking the statistics as they occur from year to year, it would be found that as a rule in Prussia the cases of smallpox nearly always occur on the frontier. He stated that there was hardly ever a death from smallpox in the army of Germany to-day—at least in the Prussian army. Vaccination is compulsory before the age of two years, after twelve years of age, and for a soldier at the time he enters the army.

DUNDAS GRANT, the President of the Society, stated that in his early practice in London he had seen smallpox. One of his earliest experiences he told in the following anecdote: He was called to a house where two young men were lying in bed stricken with smallpox. There were a number of abscesses all over their bodies. Two others in this family had recovered and two had died. The doctor said, "This says very little for vaccination." The man replied, "I have been a very foolish man. The fact is that I have always considered my blood and my wife's blood so pure that we would not have it mixed with any contamination whatever. The result is that I have lost two of my family and the only member who has escaped is the little baby, who has been vaccinated." Similarly he quoted from experience tending to prove the great value of vaccination and frequent revaccination.

## SOCIETY PROCEEDINGS.

### NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Held January 2, 1902.

The Vice-President, Hermann Knapp, M.D., in the Chair.

THE scientific portion of the meeting consisted in the continuation of a symposium on tuberculosis from the last meeting.

Present Need of Sanatoria.—Dr. George L. Peabody lamented the slowness of the process of recogni-

tion of the necessity for sanatoria in this country. The people are only just waking up to the crying need of special institutions for the care of tuberculous patients. European countries are far in advance in this matter. There are now 33 sanatoria in Germany. Eleven of these were erected in 1900. Thirteen of them were completed in 1901. There are fourteen new sanatoria projected, most of which will be finished during the present year. In Germany there is sanatorium accommodation for over 3,200 tuberculous patients. At the end of 1901, however, it was generally felt that they were as yet unable to care for tuberculous patients as they would like to. At the present time the Germans are engaged especially in the development of a movement for the foundation of polyclinics in which tuberculosis may be recognized at very early stages and observation stations in which suspected incipient cases may be kept under watchful supervision. With this is connected a movement, eminently philanthropic in character, for the maintenance of the families of patients during the absence of the usual financial support. This represents a completeness of sympathetic view with regard to tuberculosis that shows a spirit well worthy of imitation. Seventy-five per cent. of the patients admitted to German sanatoria are restored to usefulness within three months. As the result of the habits of sanitary living which have been insisted on for these patients on their return home, they become centers for the diffusion of sanitary knowledge of the most precious kind. It is well known that such patients are of great influence in preventing the further spread of tuberculosis in the families of relatives and friends.

**Situation at Sanatoria.**—There is a decided difference of opinion as to the location most suitable for sanatoria. Some prefer an elevated station; others think a lower situation quite as therapeutically effective. Some authorities insist that tuberculous patients do better in cold weather, others in warm weather. There is also a difference of opinion as to the value of exercise in the treatment of tuberculosis. Some say that the lungs need to be set at rest during the course of a tuberculous process, just as a tuberculous joint must be set at rest. All agree that even a small amount of fever is a contraindication to exercise. This has its influence with regard to the selection of a hilly site for the erection of a sanatorium. All are now agreed that open air is the most necessary element in the therapeutics of tuberculosis. The conviction of the benefit to be derived from life in the open air has been in the minds of many physicians for a long time. Many years ago Trousseau in Paris called Dr. Peabody's attention to the relative infrequency of tuberculosis among cab-drivers, although they are exposed to all the inclemencies of the weather and are especially liable to contract habits with regard to alcoholism which are now known particularly to favor the development of tuberculosis. The life of the cab-driver, almost entirely in the open air and yet without much exercise, is the ideal life for a tuberculous patient. The German Red Cross Society have established an institution to which patients may go for the day and be under the care of trained nurses and physicians, returning home at night to sleep. There is no doubt that such a system can be of great therapeutic value. Patients are educated to realize the necessity for careful habits and are taught just what is necessary for their own good. Moreover, such institutions are of distinct educational value in preventing the spread of tuberculosis, because the inmates of these institutions are taught very necessary hygienic rules.

**French Sanatorium Movement.**—The French have not been behind the Germans in the matter of providing sanatoria for the tuberculous. A special movement in Paris is that for tuberculous children. These children

are sent to a sanatorium outside of the city and later when they are convalescent are sent to a home-colony where they have the opportunity to do farm-work. Under these circumstances patients do not relapse and, if they show any tendency to be delicate, are advised to continue farm-work as an occupation and not to go back to the city. At present there is no provision made for girls in this system, but it is expected that there soon will be. The best results have been obtained in children from three to seven years of age. Statistics show an average of 50 per cent. of cures.

**America's Needs.**—While all other countries have considerable organization in this matter the United States is woefully lacking. Above all, the necessity for taking care of its tuberculous poor must be impressed upon New York City. At present they are only provided, as has been well said, with a place in which to die. It can be shown to be a matter of actual economy for the city to care for them earlier. To permit these patients to associate freely with healthy citizens is to allow the serious danger of others becoming infected to persist. Much can be done for the tuberculous poor if efforts are only directed in the right way. America has a monument in this matter of which it may well be proud. At Saranac Dr. Trudeau has furnished an example worthy of imitation and has provided a source of inspiration for philanthropic medical men that should not prove abortive.

**Phthisiophobia.**—Dr. S. A. Knopf discussed the new disease, "too great fear of consumption," which has begun to spread and may have serious results. The Treasury Department of the United States has recently been very seriously infected by it. The Surgeon-General of the Marine Hospital Service recently decided that tuberculosis is a dangerous contagious disease. This decision would act to exclude all tuberculous patients coming to this country, even though very slightly affected, and it would apply to those coming in the first and second cabin as well as to steerage passengers. This decision is founded on an entire misunderstanding of the nature of tuberculosis. It is well known that contact *per se* with tuberculous patients is not dangerous. There is no scientific basis for the classification of tuberculosis among the dangerous diseases. A consumptive cough is not necessarily infective if the sputum is cared for. In New York Dr. Hermann M. Biggs, whose position in the matter is approved by Koch, says that workmen suffering from tuberculosis are not necessarily a source of infection to coworkers if they take proper sanitary precautions. Professors Janeway and Prudden declare that tuberculosis is a communicable, but not a contagious disease. To accept this decision of the Surgeon-General of the Marine Hospital Service is to stamp patients suffering from tuberculosis with the undeserved stigma that they are a constant source of danger to others. This will work serious harm to poor people. Already healthy men are being thrown out of employment not only because they have a persistent cough themselves, but because it has become known that they have a relative suffering from tuberculosis. Dr. Knopf has seen a poor washerwoman lose her position because of a chronic bronchial cough. Others find it difficult to procure positions when the story becomes known that they have relatives who have tuberculosis. This will entail almost untold suffering and hardship if the present impression in the matter is allowed to go uncorrected. The logical conclusion from the decision of the Treasury Department would be that tuberculosis, as a dangerous contagious disease, must be reported and strictly quarantined. This would be the logical outcome of the intemperate outcry against tuberculosis. As a matter of fact, the contiguity of tuberculous patients is not dangerous and even suscep-



tible persons are safer in a well-conducted sanatorium than elsewhere.

**Vienna Experience.**—Not far from Vienna there is a sanatorium for wealthy consumptives. It was proposed to found a similar institution nearby for the poor. The authorities of the original institution feared, however, for the bad name of the locality if another sanatorium were founded. The sanatorium for the poor, then, was founded in another and distant part of the suburbs of Vienna. Soon it began to be bruited about that the neighborhood of the new sanatorium was especially favorable to consumptives and for that reason had been selected by the distinguished specialist in pulmonary diseases who had the selection of the site for the sanatorium for the poor. The older resort was deserted and even the wealthier patients came to find quarters in the new neighborhood.

**Vicinity of German Sanatoria.**—Carefully collected statistics show that in the villages near the largest German sanatoria for consumption the death-rate from pulmonary tuberculosis has actually been reduced since the establishment of these institutions. The villagers have learned the sanitary lessons that are insisted on for the patients and so there has been less possibility of infection from tuberculous sputum. This is especially true of the villages of Görbersdorf and Falkenstein, near which famous sanatoria are situated. The recent scare in California with regard to tuberculosis served only to excite ridicule among those who realized the true conditions.

**Regulation of Tuberculosis.**—The recent extraordinary Treasury Department decision might, if pushed to its logical conclusion, separate families from one another and there are many families that have a tuberculous member. Such a decision is eminently un-American and utterly unscientific. There is need in this country for a national commission, such as they have in France and in Germany, to regulate tuberculosis. At the present moment even Canada is ahead in the matter of organization for the protection of the inhabitants against the spread of the disease. There is abundance of wealth and philanthropy is not lacking in the United States. What is needed is the assurance from the profession that great good can be accomplished in this way and wealth will not be slow to help in the battle against tuberculosis.

**Fright Versus Education.**—Meantime discrimination must be made against frightening people with regard to imaginary dangers from tuberculosis, and they must be educated to a realization of just what those dangers are. Fright will not serve any useful purpose and will only serve to throw discredit upon those who insist on dangers that are non-existent.

Dr. Knopf then presented a resolution for the consideration of the Academy. It was to the effect that the recent action of the Surgeon-General of the Marine Hospital Service and the action of the Treasury Department in accordance with it, in excluding tuberculous patients, was not based on clinical experience or scientific observation and was calculated to do harm rather than good. This resolution was laid over to be voted on, as is customary, at the next meeting of the Academy.

**Crying Need for Sanatoria.**—Dr. H. L. Loomis said that there is a crying need here in New York City for a sanatorium for tuberculous patients. What is needed is not a ward in a general hospital, but a building exclusively for consumptives, such as exists in Brompton Hospital in London. At the present moment the consumptive wards of Bellevue Hospital are pitiable to behold. The patients themselves are very little, if at all benefited, and they constitute a source of danger ever urgent for other patients in the hospital. When a patient suffering from tuberculosis is brought to any

of the hospitals in Manhattan he is transferred as a rule within twenty-four hours to Bellevue. Here, by forced feeding and whisky, his condition is improved sufficiently to enable him to be moved. Then he is transferred to the City Hospital on Ward's Island, where a continuation of the forced feeding and alcohol gradually improves his condition, until he is able to be up and around. As a rule, the patient then asks to be allowed to go out, or, if not, he is discharged to make room for others who are in as pitiable a condition as he was himself. After a month, or two months, or three months, he comes back again and goes through the same circuit. From the history of a recent patient it was seen that he had made twelve such circuits. On one of his hospital rounds, the patient died. The exposure consequent upon the transfer from hospital to hospital and the changed mode of life after having been in a hospital hastened his end. If an institution for the better care of these patients were at hand, a not inconsiderable portion could be permanently cured and many of them could be benefited for long intervals. It would actually be a matter of economy to have such an institution. It would, moreover, prevent the spread of tuberculosis to no small extent. There is at present a building empty on Ward's Island, formerly rented to the Manhattan State Hospital for the Insane, which might be used to relieve the congestion in hospital wards and save many patients.

**Dangers of Hospital Wards.**—Dr. Loomis said that the present conditions in Bellevue were such that the dangers of the contraction of tuberculosis by other patients were almost inevitable. One out of three of the patients admitted to Bellevue is tuberculous. A tuberculous patient at the hospital may be put between a patient suffering from pneumonia and a patient suffering from typhoid fever with complicating bronchitis. Needless to say the risk of these other patients contracting tuberculosis is very great.

**Sanatorium Advantages.**—One of the principal advantages of a sanatorium is the constant medical supervision of patients. If city patients could be persuaded to come every day to their doctor they would do quite as well and perhaps better than if they were sent to a distant sanatorium. It is extremely difficult, however, to have patients understand the necessity for this and very hard also to have them follow out the rules as to diet and daily life that are laid down. Education must include the insistence upon the necessity for these points if tuberculous patients are to be improved at home.

**Necessity for Careful Diagnosis.**—Dr. J. E. Stubbart said that one of the important advantages of the sanatorium treatment of tuberculosis consists in the fact that very careful diagnosis is made of all cases. At the Loomis Sanatorium, for instance, all patients are examined, first, for physical signs, secondly, by the Röntgen rays, and, thirdly, as to their secretions. These observations are made by independent examiners and then notes are compared as to the conditions found. In this way the patient's exact condition is determined and the treatment most suitable for his case instituted. After all, it is not tuberculosis that must be treated, but a special individual tuberculous patient. All patients may be divided into these two classes—careful patients who faithfully follow directions given and careless patients who follow directions more or less for a few days and then on the slightest sign of improvement neglect important therapeutic measures. Careful patients recover even from somewhat extensive tuberculosis. Careless patients fail of ultimate improvement, even if they come in very incipient stages. They are unlikely, however, to come at a very early stage. It is important for the physician to study his cases and to treat each one individually. No single form of treat-

ment is always the best. A selection from the many recommendations that are made gives the most promising result. It is only by careful treatment of a great many symptoms and the faithful meeting of many indications that success comes in the treatment of tuberculosis. Undoubtedly the Government has a duty toward the tuberculous of the community. A sanatorium for the tuberculous, however, must not be run mainly with an idea to economy. It must not be conducted on the principle that the most successful management is that which cuts down expenses *per capita* as low as possible. For success in the treatment of tuberculous patients the saving of money must not be the prime object. Dr. Trudeau confesses that in his sanatorium it costs at least a dollar a day for each patient. At the Loomis Sanatorium a certain number of poor patients are taken and it costs more than a dollar, a day to support them. Pay patients at Liberty are supported at an actual expense of over \$15 a week.

**Poverty and Tuberculosis.**—Dr. Leonard Weber said that undoubtedly the prevalence of tuberculosis among the poor is due to poor feeding, poor housing and lack of ventilation. For these evils the best remedy is sanatoria supported by the Government. Sanatoria for thousands are needed. In addition, a large dispensary in which tuberculosis may be recognized in its early stages is needed. City and State aid will not be sufficient to supply the amount of room necessary for all the patients that will present themselves.

**The Tuberculous Poor.**—Dr. Freudenthal said that all are agreed that sanatoria are necessary. They must, however, be of a kind that can benefit not only the well-to-do, but those who are comparatively poor. The climate is not everything in the location of the sanatorium, nor in the selection of a place best for the treatment of tuberculosis. Neither Liberty nor Saranac is an ideal situation. Excellent results are obtained in the treatment of tuberculosis in the Jewish Hospital in Berlin in one of the most thickly-populated parts of the city. Undoubtedly, then, with proper facilities, much can be done without going far from New York City. Dr. Freudenthal says that many young persons ill with tuberculosis have very little to spend in their treatment. Seven dollars per week presents the maximum at times. If farms were to be obtained not far from the city on which such patients could live great good might be accomplished. Plenty of farms can be obtained cheap. Expensive sanatoria are not necessary. Tent colonies may accomplish all that is needed. This has been tried, experimentally, near Denver with great success. Dr. Freudenthal saw the benefit of tent-living for patients suffering from typhoid fever during the war between Germany and France. The patients asked to be allowed to remain in their tents even in October and November.

**Need of Exercise.**—Dr. Freudenthal does not believe in the rest cure for tuberculous patients. They should not only be allowed to, but should be advised to take up a farm-life. The product of their labor would help in the support of the sanatoria. If the patients were slow to recover, or if they showed a tendency to recurrence of the disease, they might be permitted to continue their farm occupations indefinitely.

**Chance for Life.**—Dr. Alfred Meyer said that the State owes all of its citizens a fighting chance for their lives. For tuberculous patients this can be secured only in sanatoria. There are 8,000 new cases of tuberculosis in New York City every year. When it was originally proposed that the State should take care of the insane, many said that the insane asylums would bankrupt the State. Now, however, 23,000 insane are cared for at an expense of \$4,000,000, and it is just beginning to be

realized how important and necessary a philanthropic duty this is for the State.

**Change of Climate.**—Dr. Edward G. Janeway said that no one who has seen the benefits that accrue from change of climate in many cases of incipient tuberculosis can argue that tuberculous patients do as well under city treatment. There is something in the change itself that does them good. In early life Dr. Janeway had a personal experience in this matter. For several winters he had a persistent bronchitis with quite a little cough. A number of remedies were taken without effect. A change of dwelling to another part of the State caused his persistent bronchitis to disappear, though he never took another dose of medicine for it. Sanatoria should be put in the most accessible place with the best possible location. Country sanatoria for incipient cases and hospitals for advanced cases are needed.

**Encourage, Not Terrify.**—Dr. Jacobi said that for many patients it is absolutely impossible to leave the city. It is not an unusual thing to find, however, that such patients, after careful examination by a physician who pronounces them tuberculous, are told that their lives absolutely depend upon their getting out of the city. They are told they must go at once to Colorado. Often between themselves and their relatives they have not the money even for their railroad fare, much less for living expenses away from home for a long time. Such advice is brutally thoughtless. Physicians must realize their responsibility in this matter and must keep before their minds the rule of Christian charity—to take care of even the least of the poor.

**Sanatoria at Home.**—Dr. Knopf said that patients often are compelled to continue their residence in the part of the country where their improvement has come. Sanatoria should be erected, then, as near as possible to the city, so as to make it easy for patients to take up their lives again after treatment.

## SOCIETY OF ALUMNI OF BELLEVUE HOSPITAL.

*Stated Meeting, Held October 2, 1901.*

The President, Alexander Lambert, M.D., in the Chair.

Dr. N. E. Brill, the retiring president, in introducing Dr. Alexander Lambert, thanked the members of the Society for the kindly courtesy with which they had assisted him in presiding over the meetings of the Society during the past year, and asked that the same courtesy be extended to his successor, who needed no formal introduction.

Dr. Alexander Lambert, in taking the chair, said that it was a source of real pleasure and one which he keenly appreciated to have been honored by the election to the presidency of the Society. It has always been the one society in which he had taken a personal interest, because he felt sure that it was an active working body and would develop from year to year. As to his intentions for the coming year, he said that he would endeavor to have presented papers, the subjects of which will be of practical interest, and which will be of such a nature as to make it worth while for the members to be present.

**Acute Ascending Infection of the Kidney; Nephrectomy.**—Dr. Alexander B. Johnson presented this patient, a woman of twenty-eight years, the mother of several children. She had been confined sixteen days before he had first seen her. The only trouble after the labor was that it was necessary to catheterize her. About one week previous to his seeing her she had been suddenly attacked with pain in the region of the left kidney, and this had been associated with chills



and fever. Her temperature at the time she was first seen by Dr. Johnson was 105° F. and the pulse was rapid and feeble. The urine was clear, but the microscope showed blood and pus-cells. Palpation in the left hypochondrium elicited extreme tenderness over the region of the kidney. He had operated upon her the next day. Under either the slightly enlarged lower pole of the left kidney could be felt. An incision had been made below the free border of the ribs, extending from the outer border of the rectus to the outer border of the erector spinae. On inspection, the kidney had appeared firm and tumefied at the lower pole. The pedicle was firmly ligated and the organ removed with scarcely any loss of blood. Her temperature at the time of the operation had been 105.2° F. and her pulse 134. Within the next three days it had gradually fallen to 99° F. and the pulse to 100, and convalescence had been established. Previous to the operation there had been a marked leucocytosis, but this had rapidly disappeared. She had left her bed on the eighteenth day, primary union having taken place except where a strand of gauze had been placed for drainage. The affected kidney was somewhat enlarged, and the diseased area was chiefly in the lower portion. The cortex was the seat of numerous minute abscesses. In the fresh state, purulent streaks could be seen following the course of the tubules down into the calices. The remainder of the kidney was in a condition of acute nephritis. The speaker said that the incision used allowed of making a small opening in the peritoneum, and with two fingers inside of the abdomen palpating the other kidney with great readiness. Another advantage was that the pedicle could be tied under the guidance of the eye, the kidney then being extirpated like any other tumor. It might be thought that the infection of the kidney had been a part of the general infection, and, while such was possible, it should be remembered that there was a history of catheterism and of an acute irritation of the bladder following this, together with a sudden appearance thereafter of chills and fever and pain in the loin. The rapid subsidence of the symptoms on the removal of the kidney was also opposed to such a view. Some years ago, on looking over the records of the Roosevelt Hospital, he had found but one case in which the kidney had been cut down upon in such an early stage of infection. That case had been one of infection in connection with an acute gonorrhea. Both kidneys had been infected and the patient had died.

**Renal Calculus.**—Dr. Johnson presented a youth of nineteen, whom he had first seen on August 14th of the present year. For five years he had suffered from perfectly characteristic attacks of renal colic referred to the left kidney. There had been no hematuria, but the urine had been pretty constantly purulent and small calculi had been passed *per urethram* from time to time.

The diagnosis in this case had been established by means of a radiograph. There were several large calculi found in the kidney. In this connection a number of radiographs of renal and ureteral calculi were exhibited. He had operated upon the young man through an incision similar to the one used in the other case. The kidney had been found greatly enlarged and the cortex everywhere thin. The pelvis was dilated and contained pus and a very large number of stones. The kidney had, of course, been removed and the wound had healed satisfactorily.

**Operation for Ventral Hernia.**—Dr. Johnson also exhibited a young man who had been operated upon by some surgeon on October 28, 1899, for an acute suppurative appendicitis. Following the operation he had suffered from a ventral hernia of some size. The

operation which Dr. Johnson had done on the hernia had consisted in removing the cicatricial tissue on either side of the wound and separating the aponeurosis of the external oblique and the tendinous continuation of the internal oblique and transversalis. Internally, the anterior sheath of the rectus was separated and the sheath split throughout the length of the hernia. The rectus was freed very largely from its sheath and dragged outward. It was then attached to the under surface of the aponeurosis of the external oblique by a series of chromic catgut mattress stitches. The aponeurosis of the external oblique was then sewed up in front. This was the second patient upon whom he had done this operation, and in both instances the result had been extremely good. Neither patient had worn a belt.

**Perineal Prostatectomy.**—Dr. Johnson then presented three men upon whom he had done the operation of perineal prostatectomy. The first patient was sixty-three years of age and had been first seen two years ago. At that time there had been a marked cystitis and he had been suffering greatly. His prostate had been removed by making a curved cut, convex forward, in the perineum and vertical cut above the pubes, and pushing the prostate down to facilitate enucleation. The only peculiar feature of the operation was that neither the bladder nor the peritoneum was opened. The treatment after such an operation was less troublesome and the operation itself seemed to be somewhat less dangerous than the ordinary one. Of course, the operation would not be applicable to every case. The convalescence had been rapid, though the patient had suffered for a time, as these persons always do, from leakage of urine. There had been no treatment for over a year and the man was perfectly satisfied with his condition. The urine was voided with normal frequency; there was still half an ounce of residual urine. Erections were not as good as formerly. The second patient was fifty-eight years of age and had been first seen by the speaker last February. For some weeks previously he had been unable to urinate, catheterism had been difficult and painful, and was followed by bleeding. A prostate of medium size had been removed by Dr. Johnson by the operation already described. At present his urine was quite clear and there was no residual urine. He urinates three times in the day, and once at night, and his general condition has improved. The third patient, a man of fifty-seven, had been admitted to hospital on July 14, 1901, complaining of the first attack of retention of urine. On admission, sixty or more ounces of urine had been removed by catheter. The prostate was soft and considerably enlarged. There was no stricture and little or no cystitis. It was thought that an operation for the removal of the prostate would give him a good prospect of relief. This operation had proved quite difficult. As soon as the tube had been removed he had begun to pass all of his urine through the perineum, and after a number of weeks there had been an annoying incontinence. By irrigation with nitrate of silver the quantity of residual urine had steadily diminished, and it was probable that within a few weeks a cure would be complete.

**A Plexiform Neuroma of the Back.**—Dr. Johnson exhibited a specimen taken from a girl of ten years, who had been brought to him during the summer with a "lump" on her back. It was supposed to be a lipoma and the house surgeon was given permission to remove it. The tumor had proved to be a very rare one, a plexiform neuroma. The literature had been collated and published by Bruns. The tumor in this case measured 4½ inches in diameter and was situated beneath the skin, but not in the muscles. It was located

over the lower ribs and appeared to be the product of the degeneration of some of the posterior branches of the spinal nerves. These tumors had been described by Bruns as closely allied to elephantiasis. When exposed, the tumor had looked like a bundle of gelatinous worms. The gelatinous quality was probably due to a myxomatous change in the degenerated tissue. The nerve fibers had disappeared. The tumor in this case, as was the rule, was entirely painless. He had seen another case of the kind operated upon by Dr. Abbe. That one had been on the neck. In the cases published by Bruns there were 30 in which the neck and face were involved, half of them being on the side of the forehead or on the upper eyelid. In seven of the cases the tumor was on the breast or back, and in three it had been on the extremities.

**Question of Saving the Kidney.**—Dr. Robert T. Morris asked how Dr. Johnson determined whether or not it was wise to save the kidney. He often found it very difficult to decide this question. Sometimes he found the kidney very much distended, a large stone blocking the pelvis, and yet the parenchyma would appear fairly healthy, though thinner than normal. On making an incision through the parenchyma and removing the calculus, the kidney seemed to be able to perform its function very well. In two such cases, however, he had found it necessary to remove the organ subsequently, one after about one year and the other after two years. The parenchyma had not contracted sufficiently to give a normal pelvis and enough urine had been retained to allow of the formation of gravel. In going over the literature of the subject he had not found discussed this question of which kidneys should be allowed to remain and which removed. He had never made use of the transverse incision used by Dr. Johnson, but had been very much struck with the apparent ease of an operation conducted through such an incision. It was evident that it gave easy access to the kidney. He would like to know whether this resulted in a strong abdominal wound; also how he sutures the oblique muscles and the transversalis in order to secure such a result. These muscles had different traction lines and, therefore, theoretically one would expect a weak abdominal wall. From palpation in this case it seemed to him that the abdominal wall was quite strong.

Dr. Johnson replied that the problem presented by the last speaker regarding what kidneys should be removed in stone cases was certainly a vexing and difficult one. Where the secreting substance of the kidney had been largely destroyed and the secretion was infectious, there could be little doubt of the wisdom of removing the kidney. However, if the greater part of the kidney structure remained normal and there were no abscesses or other evidences of a distinctly infectious process, and the stone could be easily removed and the patient's powers of resistance were good, he would be in favor of allowing the kidney to remain. If, on the other hand, there was a fairly intense degree of inflammation and the patient was feeble and had a septic temperature, he would advise removal of the kidney. There were also cases in which during the necessary manipulations for the removal of a large irregular calculus so much laceration of the kidney took place as to cause troublesome bleeding; here he would be in favor of removing the kidney. He had seen, he thought, persons die from operations done for the removal of stone from the kidney, the kidney being left behind, where recovery would probably have taken place if the kidney had been extirpated. Out of a considerable number of cases of stone and various inflammatory conditions that he had collected and many of which he had personally seen, the mortality had been notably higher than where the kidney had

been left behind. In a general way, the local and general conditions must be carefully considered at the time of the operation in the individual case in order to answer this question. He had collected forty or more cases operated upon through this incision at Roosevelt Hospital, and no case had a hernia. He was in the habit of using an interrupted suture of fine chromic catgut or sometimes of ordinary catgut of medium size. The sutures were applied fairly closely and to each layer of muscles as accurately as could be done. In his opinion, one of the reasons why these cases had a strong abdominal wound was that the entire wound, with the exception of the posterior inch, had healed by primary union. Where the cut was made so high up the tendency to hernia was nothing like so great as where it was made lower down.

Dr. Morris said, regarding the case of ventral hernia, that he had operated upon a good many cases of ventral hernia by careful dissection and accurate suturing, sometimes splitting the two sheaths of the rectus and drawing it out. He had carefully avoided having these patients wear any support except for the first few days after getting out of bed. If these artificial supports were discarded early it seemed to him that the natural supports developed much more rapidly than where the supports were worn for a considerable time. He had published a series of experiments on rabbits and dogs emphasizing this point.

**Radiography for Renal Calculi.**—Dr. A. B. Johnson said that he had given a good deal of attention during the past year to the study of X-ray photography in connection with cases of renal calculi. He was of the opinion that the time was close at hand when negative diagnoses of renal calculus could be made in persons who are not very stout, *i.e.*, men under 160 and women under 140 pounds in weight. When, however, the abdomen was very thick the X-ray tube must be placed farther away, a longer exposure was requisite; the added density of a small soft renal calculus was little as compared with the total density of such an abdomen and back. In a thin individual having a fairly dense stone one occasionally secured remarkably brilliant pictures of even small stones. Radiographs of an exceedingly small stone were exhibited as an example of these exceptionally good results. In the case reported this evening in which there had been a very large number of stones in the kidney, one large stone showed in the radiograph while the hundreds of others present did not show, except as a diffuse shadow. The apparatus used for this purpose must be capable of giving a considerable amperage of current combined with high voltage. Special tubes are also necessary—tubes which allow the use of a large amount of current, but with very little resistance in the tubes, or, in other words, what are called low-vacuum tubes. High-vacuum tubes would show large calculi. An oxalate calculus would usually give a very dense shadow, while a very small phosphatic stone would be photographed with difficulty. It was very important that the individual should have had no meal for a number of hours before the taking of the picture; it was also desirable that the large intestine should be empty.

With slender individuals and proper apparatus a person with the requisite skill should be able by taking several pictures to make the diagnosis in most cases of renal calculus. The different pictures taken should be carefully compared in order to say whether certain shadows appear uniformly in all of the photographs. The tube should be so placed with reference to the body that the X-rays are directed through the abdomen from below upwards, for, when passed in the reverse direction the liver greatly interferes.

**"Recent Studies in Immunity."**—Dr. Alexander Lambert delivered this address.



## BOOK REVIEWS.

**SURGICAL APPLIED ANATOMY.** By Sir FREDERICK TREVES, K.C.V.O., C.B., F.R.C.S., Sergeant Surgeon to H. M. The King; Surgeon in Ordinary to H. R. H. the Duke of Cornwall and York; Consulting Surgeon to the London Hospital. New Edition. Revised by the Author with Assistance of ARTHUR KEITH, M.D., F.R.C.S. Lea Brothers & Co., New York & Philadelphia.

STUDENT and practitioner alike will gladly welcome the new edition of this admirable and familiar book. It is no exaggeration to say that its text is exquisitely lucid in all details, its brisk and flowing language reminding one of a French text-book. Perhaps there is no one passage in it which more succinctly illustrates this characteristic than the following, in which the author discusses the anatomical objections that oppose themselves to the common conception of concussion of the cord. "The cord is, indeed, somewhat in the position of a caterpillar suspended by a thread in a phial of water. It would probably be difficult to disturb the internal economy of such an insect (even if it had a structure as elaborate as the cord) by other than violence that would be comparatively excessive." The description of the abdominal surface, together with the interesting characteristics of the walls and the discussion of the almost magic manner in which they guard the tender viscera from harm, is truly classic.

Indeed, this brilliant author, when given an opportunity to establish homologies between intricate anatomical conditions and the ordinary every-day affairs and objects of common observation and common life, shines with brilliancy peculiar to himself.

But while this work is one of very special merit, it is not without unpardonable defects. The illustrations are almost grotesque. They furnish examples of the most careless English art. It may in fact be said that with few exceptions there is little to justify their introduction. It is further to be regretted that in some instances the technic of some important operations is not up to date. In the discussion of stone in the bladder, for example, the operation for lateral lithotomy occupies three times the space accorded to the median and suprapubic operation. Another example, which seems to belong rather to archaic than modern technic, is that castration is cordially recommended to cause atrophy of the prostate. American surgeons have long since given up this idea.

In discussing the pancreas, the writer sets forth the relationship of this organ most clearly; but we are confronted with the startling statement that it "presents little of surgical interest." It is difficult to understand how Sir Frederick can have overlooked the brilliant work of his countryman, Mr. Mayo-Robson, on acute hemorrhagic pancreatitis.

Nevertheless, despite the numerous unfortunate illustrations and the sporadic instances of archaic technic, every reader must enjoy the book, albeit he will at the same time indulge the hope that ere long a really up-to-date edition will make its appearance.

**STUDIES OF THE INTERNAL ANATOMY OF THE FACE.** By M. H. CRYER, M.D., D.D.S., Professor of Oral Surgery, Department of Dentistry of the University of Pennsylvania. The S. S. White Dental Mfg. Co.

THERE is very little but high praise to be spoken of this valuable addition to our knowledge of the anatomy of the face and its fossae. More clearly than any other book, it demonstrates, both in text and by illustration, that "typical anatomy is ideal anatomy." It is no exaggeration to say that it is delightfully free from the

dogmatic; that its tone is essentially comparative, that it is, in short, thoroughly scientific in its attitude, from beginning to end, and leaves but little to be added to the intricate subjects with which it deals. The work is brilliantly illustrated by a good series of photographic reproductions, many of which are of section of the skull cut in every conceivable plane. Moreover, so much skill has been shown in the combining and arranging of the cuts that one can all but read the book without reference to the text. The chapter on anatomical variations is of peculiar interest and, together with one on impacted teeth, is of particular note to surgeons. On page 56 there is an illustration showing the three turbinate bones which surely should be in the hands of every student of anatomy. With unusual clearness it shows the comparative insignificance of the superior and middle bones.

Very naturally it is possible to pick a few flaws in such a work. Here, if at all, we find them where the author discusses the surgical significance of his findings. For example, on page 121, in speaking of the treatment of antral troubles, he endorses drainage via the nose rather than orally. This latter path is the one chosen by many surgeons and has advantages with which it does not seem to be credited by Dr. Cryer. But the book is an anatomy, not a surgery, and, as such it marks the turning of a big leaf in our knowledge of the subject.

**PRACTICE OF MEDICINE.** By Eminent Medical Specialists and Authorities. Edited by GEORGE ALEXANDER GIBSON, M.D., D.Sc., F.R.C.P. Edin., Physician to the Royal Infirmary, Edinburgh. In Two Volumes. J. B. Lippincott Company, Philadelphia.

THESE volumes represent a combination text-book of a type so prevalent in the United States. The editor says that the advances in every branch of medical science have been so great that a work written by several writers would most satisfactorily reflect modern English teaching and he has here given us such a volume.

From one standpoint the work is a very excellent one. It is convenient; it is conservative; the language is good, although there is great irregularity in the mode of presentation, some authors using the personal pronoun, and others the more acceptable text-book style. Each subject is treated in a sharp, practical manner and the student of medicine will gain from it a solid substratum of workable knowledge.

From the standpoint of the teacher or the progressive practitioner the work, taken as a whole, is a disappointment. In many branches the researches of recent years seem to have received no attention whatever. The old familiar groupings of disease are adhered to and newer ideas are not incorporated. The combination plan has not given a series of high class, authoritative and thoroughly modern descriptions of disease processes, but a group of comparatively superficial, quickly written and easily worded chapters.

Thus the chapters on diseases of metabolism, affections of the liver and the pancreas are extremely meager and unsatisfactory. Under diabetes no discussion is to be found of acid intoxication and its significance. The therapeutics of drugs is weak. The modern work on the chemistry of gout is not included; in fact, the newer pathological chemistry is conspicuous by its absence.

The chapters on the nervous system follow in the main the old classic of Gowers; a number of illustrations of the cranial nerve nuclei are included which are far from presenting the conditions as they have been given to neurologists by Bethe, Déjerine, Held, Van Gehuchten, Barker, and others.

If one should attempt to pass judgment on the book as a whole, it would be that, apart from certain chapters, the work is not up-to-date by some years.

Perhaps we, in America, do run after the strange gods "made in Germany" as well as in France, and give recognition to many Italian and Russian "Archives," yet a wider reading of the works of modern European workers would, we believe, have enabled the authors to make these volumes more valuable to the serious student.

**A TREATISE ON THE ACUTE INFECTIOUS EXANTHEMATA.** Including Variola, Rubeola, Scarlatina, Rubella, Varicella and Vaccinia, with Especial Reference to diagnosis and treatment. By WILLIAM THOMAS CORLETT, M.D., L.R.C.P. Lond., Professor of Dermatology and Syphilology in Western Reserve University; Physician for Disease of the Skin to Lakeside Hospital; Consulting Dermatologist to Charity, St. Alexis and City Hospitals, Cleveland. F. A. Davis Company, Philadelphia.

The obstacles in the way of broad clinical study and bedside demonstration in such dangerous and highly communicable diseases as these render it hazardous and in many cases impracticable to impart sufficient instruction to undergraduates, so the combination of fever and a skin eruption is likely to fill the young practitioner with discomfiture, if not alarm. Who, then, can better help him than the dermatologist, to whom the skin manifestations are of paramount importance? These the author handles in more detail than is customary, though the other data also show a broad and thorough acquaintance with the literature, and personal familiarity with many types of these diseases. Indeed, his chapters on etiology, pathology, symptoms, complications, diagnosis and treatment will each merit careful perusal for their wealth of material and for the pleasing style in which they are written. The talks on anomalous cases and their diagnosis, particularly those of measles and varioloid, are indeed helpful. Not the least important are the opening chapter on the history of the exanthemata, the section on disinfection and the table in which are compared the chief features in the differential diagnosis of these acute eruptive diseases. The colored plates, though perhaps illustrating fairly well the lesions, have no artistic merit and convey to the mind the impression of crudeness and exaggeration. On the other hand, the photographic reproductions are excellent and typical, aptly illustrate the text, and have a real value as aids in diagnosis.

**THE ESTIVO-AUTUMNAL MALARIAL FEVERS.** By CHARLES F. CRAIG, M.D. (Yale), Acting Assistant Surgeon U. S. Army; Pathologist and Bacteriologist to the U. S. Army General Hospital, Presidio of San Francisco, Cal. William Wood and Company, New York.

SINCE the return of our soldiers from the recent war, estivo-autumnal malaria has been so widely scattered throughout the country that an able exposition of this disease appeals to a much larger audience now than it did a few years ago. During the last two years so many peculiar cases with unusual trains of symptoms have proven to be estivo-autumnal malaria that an atypical form of this disease becomes very difficult to diagnose. The material for the proper study of this disease can be found only in the south, especially Cuba, and excellent opportunities have naturally been given to our army surgeons to investigate the disease. The life cycle of this form of malaria has now been entirely worked out and explanations of various unusual stages have been given in this book. The author had the

good fortune to watch under the microscope the development of the crescent into a flagellated organism. At first the undeveloped crescent lay within a medium-sized corpuscle which finally melted away and from the crescent the flagellae later broke forth. It was thus established (1) that crescents are developed within the red blood-cells, and (2) that the active, flagellated parasite comes from the crescent. The proper methods for staining and examination of the blood, ignorance of which often leads to negative results, are also carefully given. The book is an interesting one which ought to be of considerable value in bringing this form of malaria more clearly before the profession and in making the diagnosis of the disease more easy and more certain.

**ESSENTIALS OF OBSTETRICS.** By CHARLES J. JEWETT, A.M., M.D., Sc.D., Professor of Obstetrics and Gynecology in the Long Island College Hospital and Obstetrician and Gynecologist to the Hospital; Charter Member of the Congrès Périodique International de Gynécologie et d'Obstétrique; Fellow of the British Gynecological Society; ex-Vice-President of the American Gynecological Society, ex-President of the New York Obstetrical Society, etc. Assisted by HAROLD F. JEWETT, M.D. Lea Brothers & Co., New York and Philadelphia.

THE more elaborate work of this author is so widely and favorably known that the student is especially fortunate in having the essential facts and principles of such a treatise placed before him in a concise and well-systematized manner. This smaller work is, however, not simply a quiz compend furnishing lists of information to be quickly learned and as quickly forgotten, but sufficiently describes the important features to make it interesting reading and valuable as a textbook for the student. A clear well-illustrated chapter is written upon the development of the embryo and the management of a normal case of labor occupies a long chapter containing many useful suggestions, but the author's methods for preventing tears of the perineum differ considerably from the generally accepted ideas. Some of the articles upon pathological conditions of pregnancy and labor are too brief to be of much value for the practising physician, but undoubtedly prove entirely sufficient to supply the needs of the student for whom the book is intended.

### BOOKS RECEIVED.

*The MEDICAL NEWS acknowledges the receipt of the following new publications. Reviews of those possessing special interest for the readers of the MEDICAL NEWS will shortly appear.*

**CLINICAL HEMATOLOGY.** By Dr. John C. DaCosta, Jr. 8vo, 474 pages. Illustrated. P. Blakiston's Son & Co., Philadelphia.

**A MANUAL OF VENEREAL AND SEXUAL DISEASES.** By Drs. Wm. A. Hackett and N. E. Aronstam. Demi 8vo, 308 pages. G. P. Engelhard & Company, Chicago.

**TEXT-BOOK OF HISTOLOGY.** By Dr. Philipp Stöhr. P. Blakiston's Son & Co., Philadelphia.

**MANUAL OF PHYSICAL DIAGNOSIS FOR THE USE OF STUDENTS AND PHYSICIANS.** By Dr. James Tyson. Fourth Edition. Demi 8vo, 298 pages. Illustrated. P. Blakiston's Son & Co., Philadelphia.

**TRANSACTIONS OF THE AMERICAN GYNECOLOGICAL SOCIETY.** Volume 26, for the year 1901. J. Riddle Goffe, M.D., Secretary. Philadelphia.

**TRANSACTIONS OF THE LOUISIANA STATE MEDICAL SOCIETY.** Twenty-Second Annual Session, 1901.